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THE  
JOURNAL OF PROCEEDINGS AND ADDRESSES  
OF THE  
NATIONAL EDUCATIONAL ASSOCIATION  
OF THE  
UNITED STATES,  
SESSION OF THE YEAR 1883,  
AT  
SARATOGA,

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PUBLISHED BY THE ASSOCIATION.



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# GENERAL ASSOCIATION.

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## FIRST DAY'S PROCEEDINGS.—MONDAY, JULY 9.

The twenty-second annual meeting of the National Educational Association began its sessions at the Methodist Church, Saratoga, N. Y., on Monday, July 9, at 10 A. M.

### THE GENERAL ASSOCIATION

was called to order by Eli T. Tappan, LL. D., of Gambier, O., the president of the Association. Prayer was offered by Edwin C. Hewett, LL. D., of Normal, Ill.

An address of welcome was given by Rev. Giles P. Hawley, chairman of the Saratoga Board of Education. He said that he had been an educator for forty-five years, not only in actual work in schools, but in that of morals and religion. He deemed it an honor to appear at this time, and to give this Association a brief but formal welcome here. Politicians, bankers, sportsmen and others come here to do their work, ask no favors of anybody and then go away. Then why should educators expect words of welcome? But Prof. Hoose of New York tells me it is the fashion, and accordingly the custom must be adhered to. I welcome you as fellow-citizens of the United States and in the great work of education. The welcome to you is the most sincere, because you represent the higher grade of intellectual society. Dr. Hawley gave the Association and its members a hearty welcome in behalf of the Saratoga Board of Education. The influence of the National Association upon this or any other community is always for good, because the members are representative persons from all sections.

President Tappan, in reply, returned hearty thanks for the kindly words of welcome. This Association is glad to be welcomed everywhere it goes, and it always receives it with deep gratitude. This Association's history covers the period of the greatest growth of our country. It was organized in 1857 at Philadelphia, and the present secretary then occupied the same position. A few years since its name was changed from the National Teachers' Association to the National Educational Association.

There are 275,000 teachers in the country, and the number is increasing every day. There is a progress onward and forward with an energy and rapidity that is marvellous. There is scarcely a city in the United States that has not an organization of teachers. There is a teachers' association in almost every county. He did not know that there was a State teachers' association in every State, but the time will soon come when there will be. Time has changed the great character of the work in which this Association is engaged; it is more refined, scientific, and more enlightened. This was done by the creation of the different departments, which greatly facilitated the work of the Association. Mr. Tappan spoke of the great value of the different departments, and that to-day another department is established,—education in art.

#### LOUISVILLE EXPOSITION.

At the conclusion of his address, President Tappan read a letter from Hon. Joseph Desha Pickett, of Frankfort, Ky., who by reason of ill-health was unable to be present. He had prepared a paper on "The Best System of Common Schools under State control, with special reference to the peculiar circumstances of the Southern States." Mr. Pickett, in his letter, extended an invitation to the Association to visit Louisville, Ky., on Sept. 20, at the time of the exhibition and educational gathering there.

On motion of Thomas J. Morgan, of New York, it was ordered that a committee of five, including the chair, be appointed to represent this Association at Louisville.

A letter was received from J. B. Peaslee, of Cincinnati, O., regretting his inability to attend the present gathering of the Association.

L. S. Thompson, of Lafayette, Ind., on motion, was chosen to assist the Secretary, W. E. Sheldon, of Boston, Mass., in his labors.

The president called to the chair the senior vice-president, John Hancock, of Ohio, and proceeded to give the opening address.

#### TOPIC—"*Examination of Teachers.*"

The paper was discussed by J. H. Smart president elect of Purdue University, Indiana. The Association took a recess till 3 o'clock.

#### MEETING OF LIFE-MEMBERS.

During the recess, a meeting was held in the church of the life-members. Secretary W. E. Sheldon, the oldest life-member, was called to the chair, and Mr. Thompson chosen secretary.

President Tappan stated that the object of the meeting was in reference to the issuing of diplomas, and to correcting the record of members.

Mr. Sheldon urged the use of means to increase the brotherhood of life-membership.

The chair was, on motion, instructed to appoint committees on diplomas and records to take this matter into consideration, and named the following:

*On Diplomas*—Mrs. R. D. Rickoff of Yonkers, N. Y., L. S. Thompson of Lafayette, Ind., and E. A. Singer of Philadelphia.

*On Records*—John Hancock of Dayton, Ohio, H. S. Tarbell of Indianapolis, Ind., and D. B. Hagar of Salem, Mass.

### AFTERNOON SESSION.

The Association was called to order by the President at 3 P. M. Mr. Sheldon of Massachusetts moved to increase the committee to the Southern Exposition and Kentucky State Teachers' Association to nine members, of which Eli T. Tappan, president of the Association, should be one. Carried; and it was voted to authorize each member of the delegation to appoint a substitute in case of inability to attend. The committee was named as follows:

Eli T. Tappan, *ex-officio chairman*, T. J. Morgan, T. W. Bicknell, John Eaton, Mrs. R. D. Rickoff, John B. Peaslee, James H. Smart, Wm. W. Folwell and H. C. Spear.

### GOVERNMENT AID TO EDUCATION.

Hon. John Eaton, Commissioner of Education, Washington, D. C., gave a paper on "*What has been done for Education by the Government of the United States.*"

Mrs. Harriet Webb, of New York City, favored the Association with a poem on a shipwreck, entitled "Old Huldah." Hearty applause greeted her talented effort, and she kindly acknowledged an *encore* and, by request, gave the "Chime of Bells."

### CITY SYSTEMS OF MANAGEMENT.

At 5 o'clock J. L. Pickard, of Iowa City, Ia., read a paper on "*City Systems of Management of Public Schools.*"

At the close of this paper, its points were discussed until 6.30 o'clock when a recess was taken till 8 o'clock.

## EVENING SESSION.

The discussion upon the paper of the afternoon was continued by Messrs. Willis, Eaton, Brown and others.

The paper for the evening was then presented by Prof. G. Stanley Hall of Baltimore. His subject was,

*"Intellectual Growth and its Relation to Methods of Instruction."*

LETTER FROM GEO. A. WALTON, PRESIDENT OF AMERICAN INSTITUTE OF INSTRUCTION.

BOSTON, MASS., July 9, 1883.

PRESIDENT ELI T. TAPPAN,

*Dear Sir:*—I fully intended to be at Saratoga, and expected to gain from your meetings strength and inspiration for the conduct of my own. But with the intense heat of the past few days, it seemed wiser for me to go direct to the mountains. In my absence ex-President Mowry will extend the greetings of the American Institute of Instruction, and cordially invite all in attendance upon the National Association to renew at Fabyans the cordial relations last year established at Saratoga. Trusting you will have a large and successful meeting, I am

Sincerely yours,      GEORGE A. WALTON,  
*President American Institute of Instruction.*

## SECOND DAY—TUESDAY, JULY 10.

## MORNING SESSION.

The Association held a ten minutes session, President Tappan in the chair, when the following committees were announced:

*On Nominations*—E. E. White of Indiana, E. C. Hewett of Illinois, J. L. Pickard of Iowa, W. W. Folwell of Minnesota, H. C. Spear of Kansas, W. W. W. Jones of Nebraska, J. B. Casterlin of California, A. Gove of Colorado, W. J. Phelps of Vermont, D. B. Hagar of Massachusetts, W. A. Mowry of Rhode Island, B. G. Northrop of Connecticut, Mrs. Rebecca D. Rickoff of New York, George P. Beard of Pennsylvania, R. Bingham of North Carolina, V. C. Dibble of South Carolina, Miss Julia S. Tutweiler of Alabama, J. Baldwin of Texas, Miss Clara Conway of Tennessee, B. L. Butcher of West Virginia.

*On Resolutions*—T. W. Bicknell of Massachusetts, Miss Matilda S. Cooper of New York, W. A. Mowry of Rhode Island, H. S. Tarbell of Indiana, Miss Clara Conway of Tennessee.

*On Honorary Members*—John Eaton of Washington, D. F. DeWolf of Ohio, Mrs. M. A. Stone of Connecticut.

## EVENING SESSION.

## OFFICERS ELECTED.

The Committee on Nomination of Officers reported, through its chairman, Mr. White, the following list of officers, which was unanimously elected:

*President*—T. W. Bicknell of Massachusetts.

*Secretary*—H. S. Tarbell of Indiana.

*Treasurer*—N. A. Calkins of New York.

*Vice-Presidents*—D. F. DeWolf of Ohio, J. Baldwin of Texas, B. F. Wright of Minnesota, B. L. Butcher of West Virginia, B. G. Northrop of Connecticut, H. E. Spear of Kansas, Miss H. M. Morris of New York, J. W. Dickinson of Massachusetts, E. H. Long of Missouri, John Swett of California, G. P. Beard of Pennsylvania, Miss M. S. Cooper of New York.

*Counsellors at Large*—Eli T. Tappan of Ohio, John Eaton of the District of Columbia, W. E. Sheldon of Massachusetts.

*Counsellors*—L. S. Thompson of Indiana, Henry Raab of Illinois, Henry Sabin of Iowa, Irwin Shepard of Minnesota, A. R. Taylor of Kansas, W. W. W. Jones of Nebraska, J. B. Casterlin of California, Aaron Gove of Colorado, J. W. Phelps of Vermont, A. G. Boyden of Massachusetts, Merrick Lyon of Rhode Island, Mrs. M. A. Stone of Connecticut, Mrs. Rebecca D. Rickoff of New York, E. A. Singer of Pennsylvania, W. N. Barringer of New Jersey, R. Bingham of North Carolina, Miss Ella Peques of Mississippi, V. C. Dibble of South Carolina, Julia S. Tutweiler of Alabama, Alexander Hogg of Texas, Miss Clara Conway of Tennessee, John M. Birch of West Virginia, C. M. Woodward of Missouri, R. W. Stevenson of Ohio, C. C. Rounds of New Hampshire, Mrs. F. C. Mallon of Georgia, C. W. Heywood of Michigan, Z. Richards of the District of Columbia.

## THE LOUISVILLE EXPOSITION.

It was voted that all members attending the Louisville Exposition be considered delegates of the Association.

Letters of regret were read from Henry Barnard and Z. Richards at their inability to attend this meeting.

## THIRD DAY—WEDNESDAY, JULY 11.

## NATIONAL AID TO EDUCATION.

The Association assembled at 9 A. M., President Tappan in the chair.

At the opening of the morning session Dr. Bicknell, of Boston, chairman of the Committee on Resolutions, submitted a report, which was adopted *seriatim*.



## NATIONAL EDUCATIONAL ASSOCIATION.

*Resolutions.*

*Resolved*, That the thanks of the Association are due and tendered to all hotel proprietors, railroad managers, and all other persons in public or private capacity, who have added to the pleasure and success of this meeting.

## EDUCATION IN THE SOUTH.

*Resolved*, That we congratulate the educators in the South on the increasing interest shown in their work, and the better support it is receiving in their States, and that this specially encourages us to renew our appeal to Congress for the enactment of some adequate and proper measure of national aid to education in the Southern States.

## THE STATE FUND.

*Resolved*, That this Association sees with earnest approbation the many acts of generosity on the part of individuals and societies, which have lately been done in aid of the colored race, and that its members particularly honor the munificence of Mr. Slater, and highly approve of the action of the trustees of this fund in selecting as its chief guardian and dispenser, Dr. Atticus Haygood.

## INDIAN EDUCATION.

*Resolved*, That we observe with satisfaction that the Department of the Interior is seeking to devote certain appropriations for Indians mainly to the education of Indian children, especially to their education in industry and conduct, and that we will earnestly use our influence that Congress may coöperate to this end, that, by thus educating their children, Indian wars may cease, and the Indians may become self-supporting and orderly citizens.

## EDUCATION IN ALASKA.

*Whereas*, Alaska is the only large section of the United States for which some educational provision has not been made by law; and,

*Whereas*, It is a reflection upon our interest in universal education that Alaska should be worse off than when under the control of Russia, the United States having neglected to continue the schools that for many years were sustained by the Russian Government, or substitute better ones in their places; and,

*Whereas*, The President of the United States transmitted to the last Congress a paper from the honorable Commissioner of Education calling attention to this neglect; therefore,

*Resolved*, First, that the president and secretary of this Association be requested to prepare a paper asking the Government to make some provision for an industrial-training school at Sitka, the capital, and for an ap-

propriation to be expended by the Commissioner of Education, under the direction of the honorable Secretary of the Interior, for the establishment of schools at such points in Alaska as may be designated by the Commissioner of Education; second, that copies of the paper so prepared, signed on behalf of this Association by the president and secretary, shall be transmitted to the President of the United States, the honorable Secretary of the Interior, and the Committee of Education and Labor of the United States Senate and House of Representatives.

#### DEATH OF PROF. SAMUEL S. GREENE.

*Resolved*, That in the death of Samuel S. Greene, LL. D., late professor in Brown University, an ex-president of the National Association, this Association has lost one of its most honored and esteemed members. We desire to express our high appreciation of Prof. Greene's character, attainments and services. He was a wise counsellor, a distinguished author and educator and a true Christian. His death is a great loss, not only to this Association, but to the cause of education, and to the country. His cherished memory is a rich legacy and a valued inspiration to the profession.

Brief remarks were made by President Eli T. Tappan of Gambier, O., Thomas W. Bicknell of Boston, Mass., William A. Mowry of Providence, R. I., and Secretary William E. Sheldon of Boston, all of whom paid a glowing and deserved tribute to the character, ability, worth and faithfulness of the late Professor Greene.

The resolutions were unanimously adopted, the latter by a standing vote.

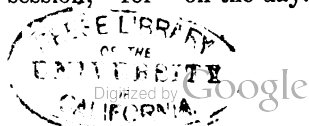
#### COMMITTEE OF NECROLOGY.

The chair then appointed the following as the Committee on Necrology for the ensuing year: William E. Sheldon of Massachusetts, Z. Richards of the District of Columbia, and E. C. Hewett of Illinois.

#### AMENDMENTS TO THE CONSTITUTION PROPOSED.

The following amendments to the constitution were proposed, to be acted upon at the regular meeting of the National Educational Association in 1884:

1. Art. IV., Sec. 2. Insert "President of the Council."
  2. Art. IV., Sec. 7. The treasurer's term of office shall continue till the settlement of the business of the session for which he is elected.
  3. Art. V., Sec. 6. Substitute "at the session," for "on the day."
- The general Association then adjourned.



## REPORT OF THE TREASURER.

## NATIONAL EDUCATIONAL ASSOCIATION

*In account with H. S. TARBELL.*

## RECEIPTS.

1882.		
July.	238 annual fees, . . . . .	\$476 00
	Four annual fees from life members, A. J. Rickoff, Rebecca Rickoff, John B. Peaslee, J. H. Hoose. . . . .	8 00
	E. Danforth, transportation tickets, . . . . .	24 00

## EXHIBIT "A." PROCEEDINGS SOLD.

L. B. Corey, . . . . .	\$2 00	
H. S. Tarbell, . . . . .	2 50	
W. D. Parker, . . . . .	12 75	
H. B. Lawrence, . . . . .	11 67	
	<hr/>	28 92

## SOLD BY W. E. SHELDON.

Miss Chester, . . . . .	12 70	
W. W. Waterman, . . . . .	10 00	
A. W. Farnham, . . . . .	5 00	
W. D. Parker, . . . . .	2 00	
Bureau of Education, . . . . .	100 00	
Edwin C. Hewett, . . . . .	3 00	
	<hr/>	132 70
Eighteen membership fees, W. E. Sheldon, Del. & H. C. R. R. for programmes for 1882, . . . . .		36 00
		55 35
Eight membership fees, per N. A. Calkins, . . . . .		16 00
Six life memberships, T. W. Bicknell, Boston, Mass., M. Stern, New York, J. A. Roberts, Dayton, Ohio, Eli T. Tappan, Gambier, Ohio, Hattie E. Morris, Brooklyn, N. Y., Josephine E. Hodgdon, Concord, N. H., . . . . .		120 00
Cash advanced by Eli T. Tappan, . . . . .	250 00	
W. E. Sheldon, . . . . .	229 97	
	<hr/>	479 97
		<hr/>
		\$1376 94

## EXPENDITURES.

1882.			
May 26.	Tickets of membership, . . . .	\$ 2 50	
June 30.	Enrolment slips, . . . .	2 25	
July 14.	Eli T. Tappan, on account, . . . .	268 00	
" "	Wm. A. Mowry, printing, etc., . . . .	150 60	
" "	Gustavus J. Orr, " " . . . .	21 41	
" "	Edward J. Danforth, " " . . . .	92 95	
" "	E. L. Kellogg & Co., " " . . . .	17 96	
" "	Telegram to U. S. Senate, etc., . . . .	6 50	
1883.			
Jan. 24.	Eli T. Tappan, on account, . . . .	54 75	
July 7.	W. E. Sheldon,		
	Postage July, 1882, to March, 1883, . . . .	15 24	
	Postal cards, circulars, printing, envelopes, letter-heads, etc., . . . .	62 21	
	Composition, press-work, binding and pa- per for 700 vols. Proceedings, . . . .	595 85	
	Alterations in manuscript, . . . .	14 72	
	Insurance on volumes, . . . .	3 00	
	Shipping four boxes to Washington, D.C., N. A. Calkins, . . . .	12 65	
	Express on bound volumes, . . . .	1 75	
	Postage and telegram, . . . .	60	
July 7.	Cash to Eli T. Tappan on account, . . . .	54 00	
			\$1376 94

The committee appointed to audit the accounts of H. S. Tarbell, Treasurer of the National Educational Association, beg leave to report that they have examined his bills and vouchers and find his accounts correct in every particular.

JOHN HANCOCK, }  
EDGAR A. SINGER, } *Committee.*

July 9, 1883.

## JOURNAL OF PROCEEDINGS OF DEPARTMENTS.

## DEPARTMENT OF HIGHER INSTRUCTION.

The Department was called to order by the President Wm. W. Folwell, LL. D., of Minnesota, who gave the opening address.

## TOPIC—"The University,—How and What?"

He was followed by an address by Prof. C. K. Adams, of Ann Arbor, Mich., read by Eli T. Tappan, LL. D.

## TOPIC—"Schools of Political Science What Should they Aim to Accomplish?"

The following officers for next year were elected:

*President*—J. L. Pickard of Iowa.

*Vice-President*—Lemuel Moss of Indiana.

*Secretary*—John H. Wright of New Hampshire.

## DEPARTMENT OF SUPERINTENDENCE.

This Department, which holds its regular annual meeting at Washington, D. C., each year, held only a brief meeting at Saratoga, the principal business of which was the election of officers.

*President*—B. L. Butcher of West Virginia.

*Vice-President*—D. F. DeWolf of Ohio.

*Secretary*—H. R. Sanford of New York.

## DEPARTMENT OF INDUSTRIAL EDUCATION.

SARATOGA, July 9, 1883.

The Section of Industrial Education held a business meeting at the concert-room of Congress Hall, at 7 o'clock, P. M.

President C. M. Woodward, of St. Louis, Mo., presided. In the absence of the Secretary, S. R. Thompson, of Lincoln, Neb., L. S. Thompson, of Lafayette, Ind., was made Secretary *pro tem*.

President Woodward appointed the following Committee on Nomination of Officers: Otto Fuchs, of the Normal Art School, Boston, G. Bamberger, of the Workingmen's School, New York, and L. S. Thompson, of Purdue University, Lafayette, Ind.

The section then adjourned to meet at the M. E. Church at 3 P. M., Tuesday, July 10.

SARATOGA, July 10, 1883.

According to adjourment the Industrial Section convened at 3 P. M. The first exercise was the inaugural address of the President of the Department, Prof. C. M. Woodward, Director of Manual Training School, Washington University, St. Louis. Subject: "*The Fruit of Manual Education.*"

The discussion of this subject was opened by F. W. Parker, of Chicago, and, on motion of Gen John Eaton, was continued by Wm. Mather, Esq., of Manchester, England. Miss Jessie Stewart, of Boston, was called on for a recitation; after which Prof. Henry Hitchings, Director of Drawing, of Boston, read a paper on "*Drawing in our Common Schools in its Relation to Industrial Education.*"

The Committee on Nominations reported as follows: President, C. M. Woodward, St. Louis; Vice-President, H. H. Belfield, Chicago; Secretary, E. A. Singer, Philadelphia. The report was received and adopted.

A paper on "*The Moral Influence of Manual Training,*" was then read by Dr. J. R. Buchanan, of Boston.

The section adjourned to meet again at 8.15 p. m.

#### EVENING SESSION.

The Industrial Department met at 8.30 and in the absence of the President, Prof. Otto Fuchs, of Boston, was chosen chairman *pro tem*.

Walter S. Perry, of Worcester, Mass., was then introduced who read a paper on "*Drawing in the Grammar Schools,*" The paper was discussed by W. S. Goodnough of Columbus Ohio; John Collins of West Philadelphia, Rev. A. A. Miner of Boston, Miss Locke of St. Louis, Mr. Barringer of Newark, Mr. Ames of Boston, W. S. Perry of Worcester, J. T. Merwin of St. Louis, and Otto Fuchs of Boston.

#### WEDNESDAY, JULY 11.

The department met at 9.30 a. m., and in the absence of L. W. Miller, of Philadelphia, who was expected to read a paper at this hour, the section adjourned to Concert Hall, where the following persons spent about ten minutes each in explaining their respective exhibitions in drawing: W. S. Perry of Worcester, Mass., Otto Fuchs of Boston, Josephine C. Locke of St. Louis, H. H. Fick of Cincinnati, W. S. Goodnough of Columbus, O., G. Bamberger of New York, and C. M. Woodward of St. Louis.

#### AFTERNOON SESSION.

The department convened at 3.30, and listened to a paper by L. W. Miller, on "*Normal Instruction in Drawing.*"

The paper was discussed by L. S. Thompson of Lafayette, Ind., Mr. Barringer of Newark, Josephine C. Locke of St. Louis, and Mr. Miller of Philadelphia, Pa. Adjourned.



## THE EXHIBIT OF DRAWING.

One of the notable features of the Industrial Department was the exhibition of drawings and of "creative" work in the concert-room of Congress Hall, where the meetings of the Industrial Section were held.

## DEPARTMENT OF NORMAL SCHOOLS.

MONDAY, JULY 9.

The Normal School section met in the Reading-room of Congress Hall, Vice-President E. C. Hewett, of Normal, Ill., in the chair. After an informal discussion on the business of the section, on motion of Professor Hoose, a committee of five was appointed by the chair to nominate officers for the section for the ensuing year. The following named gentlemen were appointed on the committee; viz., Gen. T. J. Morgan of New York, Prof. D. B. Hagar of Massachusetts, Prof. Irwin Shepard of Minnesota, Prof. A. R. Taylor of Kansas, Prof. J. Baldwin of Texas.

TUESDAY, JULY 10.

The Department of Normal Schools met at 9.15 A. M.; called to order by Prof. E. C. Hewett Vice President, in the chair.

Mr. Hewett, gave the opening address on

*"Normal Schools: their Origin, Object and Condition,"*

*Discussion.*

The address of the president was discussed first by Prof. J. H. Hoose, of Cortland, N. Y. He would, he said, qualify what the paper claimed for schools having for their objects the preparation of teachers for their work, being termed normal schools. Some may claim to fit candidates to teach who do not necessarily do normal work. Culture may be sought as a sufficient preparation to teach. Individual ideas of normal work are not the standard. He also criticised the statement that we learn to do by doing. It applies to elementary knowledge, but not to advanced stages of instruction. Professional knowledge, as such, enables the teacher to proceed into new cases and solve new problems. A knowledge of theory and method is necessary; practice is good, but not all-sufficient.

Gen. Morgan, of Potsdam (N. Y.) State Normal School, claimed that normal schools must necessarily do other than professional work. He claimed that it is a part of the duty of these association meetings to formulate a body of educational doctrine.

*Right Use of Memory.*

Hon. B. G. Northrop, of Clinton, Conn., read a paper on the "*Right Use of Memory vs. Cramming.*"

## OFFICERS ELECTED.

After recess. Gen. Morgan, chairman of Committee on Nominations, reported as follows:

*President*—Prof. E. C. Hewett of Illinois.

*Vice-President*—J. Baldwin of Texas.

*Secretary*—Miss M. S. Cooper of New York.

The report was adopted.

*Normal School Problem.*

Prof. H. H. Straight, of Oswego, N. Y., read a well-prepared paper on "*The Normal School Problem and the Problems of the Schools.*"

He spoke of the value of the old-time word "Industry." This word was born a slave, it then became a serf, and is now seeking freedom. He spoke of it under the three heads of industry in disposition, in knowledge and in power. He spoke in favor of object teaching and the Kindergarten system.

Prof. Straight, at the close of his paper, proposed the following resolution, which, on motion of Gen. Morgan, was laid upon the table for future discussion:

*Resolved*, That, in the judgment of this Association, a committee should be appointed to confer with the one already appointed by the American Association for the Advancement of Science: 1st, with reference to the best methods of introducing scientific and industrial training into the public schools; 2d, with reference to the possibility of bringing the principal scientific and educational organizations of the country into working harmony in the attempt to build a science of American education.

Mrs. Harriet Webb favored the department with the recitation of "Mary, Queen of Scots."

*The Model School.*

Prof. Charles De Garmo, of Normal, Ill., read a paper on "*Place and Function of the Model School.*"

*Discussion.*

In the discussion which followed the reading of this paper, Gen. Morgan questioned the manner of determining the work as described in the paper which has reference to and fixes the limitation of courses of studies.

Dr. Hoose followed in the same line of discussion.

Mr. Barringer, of Newark, N. J., also criticised the paper in a categorical method.

The subject was further discussed by Mr. Corey of New York, and Col. Parker of Illinois, who expressed the thought that a model school was as essential to the normal school as a laboratory to a chemical department. He would put all professional instruction and training around the model school. Give teachers freedom enough to work out their own ideas, and limitation enough so they will not spoil their work. The normal school has no right to exist unless there is a science of education. There is a science of education. There can be no normal school that cannot point to a grammar or primary school and say, There is our work,—our science embodied.

Mr. Boyden followed, answering Col. Parker.

Mr. Soldan of St. Louis followed. He would agree with Col. Parker in spirit and purpose, but he differs in finding fault with schools as a whole on account of special faults. There are two sides of the question; there is a science and an art,—both must be studied.

After a general and spirited discussion by these gentlemen, the section adjourned.

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#### ELEMENTARY DEPARTMENT.

The president being absent, Mr. W. E. Barringer, of Newark, N. J., called the session to order, and in the absence of the secretary, Ed. Smith, of Syracuse, N. Y., was elected secretary *pro tem*. Prof. H. H. Fick, of Cincinnati, O., read a paper on

#### *“The Education of the Heart.”*

Gen. Phelps of Vermont followed in discussion of the paper.

#### OFFICERS ELECTED.

After the reading of the paper, on motion of Mr. Sheldon of Massachusetts the report of the Committee on Nomination of officers for the ensuing year was given as follows:

*For President*—F. Louis Soldan of Missouri.

*For Vice-President*—Wm. E. Barringer of New Jersey.

*For Secretary*—Miss Ella Calkins of New York.

The report of the committee was adopted and the officers declared elected.

Miss Jessie Stewart, of Boston, Mass., was presented and read the poem entitled "The Boys," by Oliver W. Holmes.

Hon. Henry Raab, State Superintendent of Public Instruction of Illinois, was introduced, and read a paper on,

*"Primary Education; What and How?"*

*Discussion.*

This paper was discussed by W. E. Sheldon of Massachusetts, who said he felt that this department should take its legitimate part in the Association, and that in the elementary school those things should be taught that instruct the heart and the mind. He said he would rather be the best elementary teacher in the country than to be president of a university. In this field we should be missionaries, and, by zeal and earnestness, carry on the good work; and from the cradle to the high school develop those virtues of a celestial character which make for glorious results.

Mr. Hancock said if we do not discuss this admirable paper it is not because we do not believe in it, but because we most heartily concur. It is a grand thing to contemplate what can be done in the primary department, and the awakening to this work is as universal as it will be salutary.

Remarks were also made by G. F. Mills of South Williamstown, Mass., Mr. Bartholemew of Louisville, Ky., Mrs. Pollock of Washington, D. C., Mr. Kellogg of New York, Mr. Grant of Nebraska, and Mr. Spear of Kansas.

*The Resolutions.*

The Committee on Resolutions presented the following:

*Resolved*, (1.) That it is a subject of congratulation that an increased attention is paid to the instruction of young children, and that there is apparent increased faith in its importance and necessity.

(2.) That we estimate the Kindergarten as a source of new life for our primary schools, and that we believe the training in the power of doing there begun should be continued in them. The great educational need is a course of instruction that shall provide for the heart, brain and hand.

(3.) That we urge upon all teachers to give their young pupils a taste for pure literature, to open to them the stores of enjoyment provided by our best authors, and in discouraging in every way the circulating and reading of the flashy and demoralizing publications that are so abundant on the counters of the newsdealers.

(4.) That we urge manufacturers to provide the means at once for a course of instruction in mechanical art and industry, including drawing, moulding, etc.

JOSEPH E. HAGINS, }  
A. M. KELLOGG, } *Committee.*  
F. W. PARKER, }

General Phelps of Vermont presented the following :

*Resolved*, That the inclination toward military grandeur and display which is fostered of late years by Grand Army organizations, officers' reunions, Decoration Day observances, and dedication of soldiers' monuments, demand renewed efforts on the part of the educators of the country for counteracting these hostile influences against our institutions of popular self-government.

On motion, this resolution was laid on the table, and the report of the Committee on Resolutions was adopted.

The department adjourned.

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### ORGANIZATION OF A NEW DEPARTMENT.

At a business session the following petition was presented :

The undersigned, members of the National Educational Association, respectfully ask permission to establish, in accordance with Sec. 8, Art. IV. of the constitution, a sixth department, to be called the Department of Art Education.

J. H. Smart,	Josephine C. Locke,	Edgar A. Singer,
W. S. Goodnough,	A. J. Fitzgerald,	D. F. DeWolf,
Henry H. Fick,	L. L. Brown,	A. J. Morrison,
John S. Clark,	H. S. Tarbell,	W. T. Harris,
Walter S. Perry,	Irwin Shepard,	J. A. Kelly,
L. S. Thompson,	Amos M. Kellogg,	A. G. Boyden,
Jas. F. C. Sickel,	F. W. Parker,	J. J. Mills.

At a subsequent meeting, the Board of Directors unanimously voted to establish a Department of Art Education, in accordance with the petition.

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### DEPARTMENT OF ART EDUCATION.

The new department met at 5 P. M., Monday, July 9, for the purpose of organizing. John S. Clark, of Boston called the meeting to order by nominating for temporary chairman L. S. Thompson of Lafayette, Ind., which was unanimously carried, H. H. Fick of Cincinnati being elected secretary.

Considerable discussion prevailed in reference to the future relation between the new department and the Department of Industrial Education.

Mr. Fick moved that the Board of Directors of the National Educational Association be petitioned to change the name of the Department of Industrial Education to read Department of Industrial and Art Education; this motion was seconded and discussed, but finally laid upon the table.

It was moved and seconded that the department effect a permanent organization, and that a committee of five be appointed to nominate officers for the ensuing year. Carried. The chair nominated as such committee, John S. Clark, James H. Smart, W. S. Goodnough, H. H. Fick and C. M. Woodward.

After a recess of five minutes the names of the following officers were reported and elected:

*President*—L. S. Thompson, Lafayette, Ind.

*Vice-President*—W. S. Perry, Worcester, Mass.

*Secretary*—Josephine C. Locke, St. Louis, Mo.

There was also appointed a committee on Course of Study and Methods of Teaching as follows: James MacAlister, Philadelphia, Penn., Otto Fuchs, Boston, Mass., Walter S. Goodnough, Columbus, O., H. H. Fick, Cincinnati, O., Josephine C. Locke, St. Louis, Mo.

The meeting then adjourned.

Because of meetings of the General Association the department met in the basement of the M. E. Church, at 9 A. M., July 11.

A communication was received from Mr. H. H. Fick, of Cincinnati, resigning his position on the committee. It was moved and seconded that Mr. Hahnstein, of Chicago, be elected to fill Mr. Fick's place; carried.

It was moved and seconded that the president, in connection with the committee, fill vacancies that may occur through resignations.

The president, having read a series of suggestions regarding a course of study, it was moved and seconded that these be referred to the committee; carried.

The department then adjourned to meet with the General Association at its next annual meeting.

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## BOARD OF DIRECTORS. PROCEEDINGS FOR 1883.

SARATOGA, July 9, 1883.

The Board of Directors of the National Educational Association met at the Reading-room, Congress Hall, Saratoga, at 8 o'clock, A. M. President Tappan, presiding. Present: Tappan, Ohio; Sheldon, Massachusetts; Camp, Connecticut; Tarbell, Indiana; Baldwin, Texas; Stevenson, Ohio; Morgan, New York; Miss Tutweiler, Alabama; Bicknell, Massa-

chusetts; Pickard, Iowa; White, Indiana; Eaton, District Columbia; Mowry, Rhode Island; Harris, Massachusetts; Smart, Indiana; Hancock Ohio; Calkins, New York; Singer, Pennsylvania; Sypher of Philadelphia Teachers' Institute.

The report of the Treasurer, H. S. Tarbell, was made, and Messrs. Hancock and Singer were appointed by the president an auditing committee.

They reported that the accounts had been properly kept and vouchers correct. The report was adopted and ordered to be placed on file.

Voted to make the hours of meeting for the General Association A. M. at 9 o'clock, P. M. at 3 o'clock, Evening at 8 o'clock.

The board then considered the questions of finance and publication of the Volume of the Proceedings, remarks being made by Messrs. White, Morgan, Sheldon, Stevenson, Eaton and others.

The president presented the proposition of C. H. Evans & Co. of St. Louis, Mo., to publish the Volume of 1883-4, in connection with their College and School Directory. On motion of Mr. Sheldon a committee of five was raised to take the whole question into consideration and report to the board.

Mr. Sheldon presented the petition of James H. Smart and twenty members of the Association asking permission to establish, in accordance with Section 8, Article IV. of the Constitution, a sixth Department, to be called the *Department of Art Education*. The petition was granted and the new Department established, unanimously.

The president presented the substance of a letter from the Association of Teachers of Cuba, and he was instructed to make appropriate reply and send volume of our Proceedings.

The report of the "*Life Directorship Fund*" was made by President Tappan. J. L. Pickard of Iowa was designated to fill the vacancy caused by the death of W. D. Henkle, and a new bond for \$600 was ordered by the board to be approved by the directors. Voted to authorize the president to submit certain amendments to the Constitution relating to the tenure of office of Secretary and Treasurer. Adjourned.

WM. E. SHELDON, *Secretary*.

### NEW BOARD.

WEDNESDAY, July 11, 1883.

The New Board of Directors met at Congress Hall, President Bicknell in the chair. The records were read and approved by Secretary Tarbell. After a full discussion of the time and place of the next meeting the subject was referred to the Executive Board, with power to make all arrangements.

The Treasurer was authorized to pay all bills so far as funds would allow.

The Committee on Printing the annual volume was given discretionary power to publish, if funds could be secured.

The Directors then adjourned.

H. S. TARBELL, *Secretary*.

# CONSTITUTION

OF THE

## NATIONAL EDUCATIONAL ASSOCIATION.

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### PREAMBLE.

To elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States, we, whose names are subjoined, agree to adopt the following

### CONSTITUTION.

*[As Amended July 13 and 16, 1880.]*

#### ARTICLE I.—NAME.

This Association shall be styled the National Educational Association.

#### ARTICLE II.—DEPARTMENTS.

*[As Amended July 1883.]*

SECT. 1. It shall consist of six departments: the first, of School Superintendence; the second, of Normal Schools; the third, of Elementary Schools; and the fourth, of Higher Instruction; and the fifth of Industrial Education; and sixth of Art Education and a National Council of Education.

SECT. 2. Other departments may be organized in the manner prescribed in this Constitution.

#### ARTICLE III.—MEMBERSHIP.

SECT. 1. Any person in any way connected with the work of education shall be eligible to membership. Such person may become a member of this Association by paying two dollars and signing this Constitution; and he may continue a member by the payment of an annual fee of two dollars. On his neglect to pay such fee, his membership will cease.

SECT. 2. Each department may prescribe its own conditions of membership, provided that no person be admitted to such membership who is not a member of the general Association.

SECT. 3. Any person eligible to membership may become a life-member by paying at once twenty dollars.



## ARTICLE IV.—OFFICERS.

SECT. 1. The officers of this Association shall be a President, twelve Vice-Presidents, a Secretary, a Treasurer, one Counsellor for each State, District or Territory represented in the Association, and the officers charged with the administration of their respective departments. Any friend of education may become a life-director by the donation of one hundred dollars to the Association at one time, either by himself or on his behalf; and any educational association may secure a perpetual directorship by a like donation of one hundred dollars, the director to be appointed annually or for life.

SECT. 2. The President, Vice-Presidents, Secretary, Treasurer, Counsellors, Life Directors, and presiding officers of their respective departments shall constitute the Board of Directors, and, as such, shall have power to appoint such committees from their own number as they shall deem expedient.

SECT. 3. The elective officers of the Association shall be chosen by ballot, unless otherwise ordered, on the second day of each annual session, a majority of the votes cast being necessary for a choice. They shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen.

SECT. 4. Each department shall be administered by a President, Vice-President, Secretary, and such other officers as it shall deem necessary to conduct its affairs.

SECT. 5. The President shall preside at all meetings of the Association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence, the first Vice-President in order who is present shall preside; and in the absence of all Vice-Presidents, a *pro tempore* chairman shall be appointed on nomination, the Secretary putting the question.

SECT. 6. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the Association and all meetings of the Board of Directors, and shall conduct such correspondence as the Directors may assign, and shall have his records present at all meetings of the Association and of the Board of Directors. The Secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department.

SECT. 7. The Treasurer shall receive and hold in safe keeping all moneys paid to the Association, shall expend the same only upon the order of the Committee of Finance, shall keep an exact account of his receipts and expenditures, with vouchers for the latter, which accounts he shall render to the Board of Directors prior to each regular meeting of the Association, and shall also present an abstract thereof to the Association. He shall give bond for the faithful discharge of his duties as may be required by the Board of Directors.

SECT. 8. The Board of Directors shall have power to fill all vacancies in their own body, shall have in charge the general interests of the Association, shall make all necessary arrangements for its meetings, and shall do all in its power to make it a useful and honorable institution. Upon the written application of twenty members of the Association for permission to establish a new department, they may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as the others. The formation of such department shall in effect be a sufficient amendment to this Constitution for the insertion of its name in Article II., and the Secretary shall make the necessary alterations.

SECT. 9. The Board of Directors shall appoint three Trustees, into whose hands shall be placed for safe keeping and investment all funds which the Association may receive from the creation of life-directorships, or from donations, unless the donors shall specify other purposes for which they may be used. The income of such funds so invested shall be used exclusively in defraying the expense of publishing the annual volume of the Association, unless the donors shall specify otherwise. The Board of Directors shall require such Trustees to give to the Association their joint bond in a sum equal to twice the amount of such trust fund as may be in their hands.

#### ARTICLE V.—MEETINGS.

SECT. 1. The annual meeting of the Association shall be held at such time and place as shall be determined by the Board of Directors.

SECT. 2. Special meetings may be called by the President at the request of five Directors.

SECT. 3. Any department of the Association may hold a special meeting at such time and place as by its own regulations it shall appoint.

SECT. 4. The Board of Directors shall hold their regular meetings at the place, and not less than two hours before the assembling of the Association.

SECT. 5. Special meetings may be held at such other times and places as the Board or the President shall determine.

SECT. 6. Each new Board shall organize on the day of its election. At its first meeting a Committee on Publication shall be appointed, which shall consist of the Secretary of the Association for the previous year, and one member from each department.

#### ARTICLE VI.—BY-LAWS.

By-Laws, not inconsistent with this Constitution, may be adopted by a two-thirds vote of the Association.

## ARTICLE VII.—AMENDMENTS.

This Constitution may be altered or amended at a regular meeting by the unanimous vote of the members present, or by a two-thirds vote of the members present, provided that the alteration or amendment has been snbstantially proposed in writing at a previous meeting.

## BY-LAWS

1. At each regular meeting of the Association there shall be appointed a Committee on Nominations, one on Honorary Members, and one on Resolutions.
2. The President, First Vice-President and Secretary shall constitute a Committee on Finance.
3. Each paying member of the Association shall be entitled to a copy of its Proceedings.
4. No paper, lecture, or address shall be read before the Association or any of its departments in the absence of its author, nor shall any such paper, lecture, or address be published in the volume of Proceedings without the consent of the Association in each case.

# NAMES ENROLLED AT SARATOGA,

ARRANGED ALPHABETICALLY BY STATES.

[The names in *italics* are those of life-members.]

## ALABAMA.

Julia S. Tutweiler, Livingston, Sumpter Co.

## CALIFORNIA.

J. Bartine Casterlin, Arcata.

## CANADA.

Banfield Capron, Paris, Ont.

Arnoldus Miller, Walkerton, Ont.

## COLORADO.

*Aaron Gove*, Denver.

## CONNECTICUT.

David N. Camp, New Britain.

Miss S. P. Davis, Hartford, 554  
Main St.

Geo. G. McLean, Portland.

Birdsey G. Northrop, Clinton.

Mrs. B. G. Northrop, Clinton.

Francis T. Russell, Waterbury.

Mrs. F. T. Russell, Waterbury.

*Mrs. M. A. Stone*, New Milford.

Mrs. W. H. Whitney, Thompson-  
ville.

## DISTRICT OF COLUMBIA.

Hon. John Eaton, Washington.

Mrs. Louise Pollock, Washington,  
928 Eighth St.

## ILLINOIS.

Henry H. Belfield, Chicago, 196  
Center St.

Harriet E. Cushman, Mattoon.

Mrs. E. F. Dummer, Chicago, 419  
Washington Boulevard.

Edwin C. Hewett, Normal.

Francis W. Parker, Normalville,  
Cook Co.

Henry Raab, Springfield.

H. H. Straight, Normalville, Cook  
Co.

## INDIANA.

Susie Horney, Richmond, 327 No.  
Eighth St.

Mattie Horney, Richmond, 192  
Elm St.

Joseph J. Mills, Indianapolis, 771  
No. Alabama St.

Lemuel Moss, Bloomington.

Roda E. Selleck, Indianapolis, 413  
No. Tenn. St.

*J. H. Smart*, Lafayette.

*L. S. Thompson*, Lafayette.

H. S. Tarbell, Indianapolis.

*Emerson E. White*, Lafayette.

## IOWA.

Henry K. Edson, Grinnell, Iowa  
College.  
Geo. L. Farnham, Council Bluffs.

J. L. Pickard, Iowa City.  
Henry Sabin Clinton.

## KANSAS

H. C. Spear, Topeka.

A. R. Taylor, Emporia

## KENTUCKY.

*W. H. Bartholomew*, Louisville.

Jessie Stewart, Louisville 1124 W.  
Greene St.

## MASSACHUSETTS.

Charles H. Ames, 7 Park St., Bos-  
ton.

*Thomas W. Bicknell*, Boston.

Albert G. Boyden, Bridgewater.

Arthur C. Boyden, Bridgewater.

Henry K. Burrison, West Newton.

Mrs. Hattie Burrison, West New-  
ton.

Abbie E. Cushman, Boston, Saw-  
yer Av.

John S. Clark, 7 Park St., Boston.

Nellie M. Davis, Holden.

Miss L. E. Fay, Springfield, 27  
Wilcox St.

Mrs. Chester Field, 528 Columbus  
Av., Boston.

M. Louise Field, 528 Columbus  
Av., Boston.

Otto Fuchs, 150 K St., So. Boston.

Homer T. Fuller, 18 Boynton St.,  
Worcester.

Mrs. H. T. Fuller, 18 Boynton St.,  
Worcester.

N. W. Goddard, Malden.

Miss A. F. Goddard, Malden.

G. Stanley Hall, North Somerville.

*Wm. T. Harris*, Concord.

Miss M. M. Harmon, Springfield

D. C. Heath, 13 Tremont St., Bos-  
ton.

Henry C. Hardon, South Boston.

Henry Hitchings, Dedham.

Mrs. H. Hitchings, Dedham.

J. E. Humphrey, 7 Park St., Bos-  
ton

John E. Kimball, Newtonville.

Edwin D. Mead, 13 Tremont St.,  
Boston.

A. A. Miner, 528 Columbus Ave.,  
Boston.

Mrs. A. A. Miner, 528 Columbus  
Ave., Boston.

Eiram Orcutt, 16 Hawley St., Bos-  
ton.

James A. Page, Dwight School  
Boston.

Walter S. Perry, Worcester, 35  
West St.

Mrs. Walter S. Perry, Worcester,  
35 West St.

Mrs. R. R. Pomroy, Newton, Or-  
phan Home.

D. W. Russell, No. 2 Adv. Build-  
ing, Boston.

Henry C. Sawin, Newton, Maple  
Place.

*Wm. E. Sheldon*, Boston.

Miss C. St. John, Springfield, 60  
High St.

Jessie Stewart, 31 Dwight St., Bos-  
ton.

Mary J. Webber, 11 Nassau St.,  
Boston.

Henry W. Wheeler, 4 Park St.,  
Boston.

## MICHIGAN.

Miss A. J. Fitzgerald, Adrian.

## MINNESOTA.

Wm. W. Folwell, Minneapolis.  
Chas. E. S. Rasey, Faribault.

Irwin Shepard, Winona, State Normal School.  
B. F. Wright, St. Paul.

## MISSISSIPPI.

Miss E. Perques, Oxford.

Mrs. H. M. Woods, Meridian.

## MISSOURI.

Ben Blewett, St. Louis, Humbolt School.  
Josephine C. Locke, St. Louis.  
E. H. Long, St. Louis.  
Mrs. E. H. Long, St. Louis, Cor. Chesnut and 7th.

Hasy Newington, St. Louis, 1603 Washington Av.  
*Louis F. Soldan*, St. Louis, Normal School.  
Calvin M. Woodward, St. Louis.

## NEBRASKA.

H. S. Grant, Peru.  
W. W. W. Jones, Lincoln.

Eliza C. Morgan, Peru, State Normal School.

## NEW HAMPSHIRE.

John H. Wright, Hanover.

## NEW JERSEY.

Wm. N. Barringer, Newark, City Hall.  
Geo. H. Barton, Jersey City, 812 Grand St.  
C. N. Conklin, Jersey City, 91 Clark St.  
James Cusack, Hoboken.  
E. H. Day, Jersey City.  
W. L. Dickinson, Jersey City, 63 Wayne St.  
Joseph E. Haynes, Newark.

C. A. Hoyt, Chatham.  
Edward Kelly, Jersey City, Public School No. 4.  
M. H. Paddock, Jersey City, High School.  
Mrs. A. M. Parke, Ocean Grove.  
J. Ward Smith, Newark, Ridgeway Av.  
Cornelia M. Wigent, Jersey City, High School.

## NORTH CAROLINA.

R. Bingham, Bingham School.

## OHIO.

Thomas P. Ballard, Columbus, 41 High St.  
Leroy D. Brown, Columbus.  
Eliab W. Coy, Cin., Hughes High School.  
John W. Dowd, Toledo.  
E. L. Dunlap, Danville, Knox Co.  
Henry H. Fick, Cincinnati.

Samuel Findley, Akron.  
T. E. Flanegin, Pomeroy.  
Timothy H. Foley, Piqua.  
A. E. Gladding, Bellevue.  
Walter S. Goodnough, Columbus, 161 Hamilton St.  
*Thomas W. Harvey*, Painesville.

*John Hancock*, Dayton.

*Oliver Jay*, St. Marys.

*James A. Kelley*, Hamilton.

*Chas. L. Loos, Jr.*, Dayton.

*Carrie L. Miller*, Dayton, Cor. 2d  
and Williamson Sts.

*Rosa B. Miller*, Dayton, 111 Greene  
St.

*Ed. G. Smith*, Hillsboro.

*Eli T. Tappan*, Gambier.

*R. W. Stevenson*, Columbus.

#### PENNSYLVANIA.

*Henry C. Johnson*, Bethlehem, Le-  
high University.

*F. A. March*, Easton, Lafayette  
College.

*And. J. Morrison*, Philadelphia,  
954 Randolph St.

*Samuel M. Otto*, Philadelphia,  
Shoemakertown.

*Miss O. J. Patterson*, New Wil-  
mington.

*Edgar A. Singer*, Philadelphia,  
4764 Penn St.

*M. A. Sickel*, Philadelphia, 509 N.  
40th St.

*Mrs. M. A. Sickel*, Philadelphia,  
509 N. 40th St.

#### PRUSSIA.

*Charles De Garmo*, Halle on Saale, 31 Karlstrasse.

#### RHODE ISLAND.

*James C. Greenough*, Providence,  
144 Angel St.

*Merrick Lyon*, Providence, 169  
Powell St.

*Wm. A. Mowry*, Providence, 49  
Snow St.

#### SOUTH CAROLINA.

*Virgil C. Dibble*, Charleston, 32 Montague St.

#### TENNESSEE.

*Miss Clara Conway*, Memphis.

*John M. Webb*, Culleoka.

*W. R. Webb*, Culleoka.

*W. D. Wyatt*, Chattanooga.

#### TEXAS.

*J. Baldwin*, Huntsville, Normal School.

#### VERMONT.

*George P. Beard*, Randolph.

*J. W. Phelps*, Brattleboro.

#### WEST VIRGINIA.

*John M. Birch*, Wheeling.

*B. L. Butcher*, Wheeling.

#### NEW YORK.

*Helen M. Ayres*, Penn Yan.

*Gabriel Bamberger*, 242 E. 51st St.,  
N. Y. C.

*Miss Sarah F. Buckelew*, 16 John-  
son St., Brooklyn.

- Miss D. Buckelew, 16 Johnson St., Brooklyn.
- E. Belknap, Madilla, Otsego Co.
- Wm. C. Bailey, 26 Adams St., Rochester.
- C. W. Bardeen, Syracuse.
- N. N. Bull, Oneonta, Otsego Co.
- Edward N. Bristol, 29 W. 23d St., N. Y. C.
- C. W. Brown, 1 Bond St., N. Y. C.
- Miss Clara E. Bqoth, Cortland.
- Joseph Rodes Bru, 205 E. 36th St., N. Y. C.
- Miss Matilda S. Cooper, Normal School, Oswego.
- Miss Ella Calkins, 124 E. 80th St., N. Y. C.
- C. N. Cobb, 108 Wall St., Auburn.
- B. Sunderland Cotes, 842 Broadway, N. Y. C.
- Arthur Cooper, 28 Bond St., N. Y. C.
- George Cooper, 28 Bond St., N. Y. C.
- Mrs. Amy B. Conklin, 97 Greenwich St., N. Y. C.
- A. P. Chapin, 44 State St., Rochester.
- Lucien B. Corey, Hicksville, Queen Co.
- Geo. T. Church, Saratoga Springs.
- Harvey C. Camp, 357 Flatbush Ave. Brooklyn.
- Mrs. H. C. Camp, 357 Flatbush Ave., Brooklyn.
- Miss Mary E. Callaghan, Charlton, Saratoga Co.
- Miss S. E. Collins, Cortland.
- N. A. Calkins, 124 E. 80th St., N. Y. C.
- Mrs. Albert Day, N. Y. C.
- Mrs. Julia M. Dewey, Hoosick Falls.
- Chas. F. Dowd, Saratoga Springs.
- Albert Day, 252 Broadway, N. Y. C.
- H. J. Danforth, 3 Bond St., N. Y. C.
- Lewis M. Evans, 44 North Pearl St., Buffalo.
- S. A. Ellis, 7 Clifton St., Rochester.
- Belle Garrett, 625 West Church St., Elmira.
- J. M. Hawkes, 108 E. 86th St., N. Y. C.
- Mrs. J. M. Hawkes, 108 E. 86th St., N. Y. C.
- Miss Anna Hiller, 137 E. 49th St., N. Y. C.
- M. L. Hiller, 137 E. 49th St., N. Y. C.
- M. B. Hall, Liberty, Sullivan Co.
- Mary F. Hendrick, Cortland.
- J. H. Hoose, Cortland.
- Louis P. Juvet, Glens Falls.
- Mrs. Kraus Boelte, 7 E. 22d St., N. Y. C.
- H. C. Kirk, Phelps, Ontario Co.
- Amos M. Kellogg, 21 Park Place N. Y. C.
- Geo. N. Kneeland, Holley, Orleans Co.
- John Kraus, 7 E. 22d St., N. Y. C.
- S. G. Love, Jamestown.
- Henry M. Leipziger, 1435 Lexington Ave., N. Y. C.
- Geo. F. Lyon, Binghamton.
- Orlando Leach, 16 Astor Place, N. Y. C.
- Charles D. Larkins, Fayetteville, Onondaga Co.
- Henry T. Little, 107 Chambers St., N. Y. C.
- A. W. Morehouse, Port Byron.
- S. Mansfield, Wappinger's Falls, Dutchess Co.
- John G. McNary, 30 Vandewater St., N. Y. C.
- Thos. J. Morgan, Potsdam.
- J. Carlton Norris, Walworth, Wayne Co.
- John A. Nichols, Yonkers.
- Samuel M. Perkins, 753 Broadway, N. Y. C.
- Geo. A. Plimpton, 4 Bond St., N. Y. C.
- Mrs. W. M. Rossiter, per E. Rossiter, G. C. Depot, Hudson River R. R.
- Andrew J. Rickoff, Yonkers.
- Mrs. R. D. Rickoff, Yonkers.
- H. R. Sanford, Middletown.
- Miss Julia A. Smith, 142 Pierrepont St., Brooklyn.
- Miss Kate Stoneman, State Normal School, Albany.



Edward Smith, Syracuse.  
*J. Dorman Steele*, Elmira.  
 C. E. Surdam, Port Washington,  
 (L. I.)  
 Geo. H. Shattuck, Medina.  
*M. Stern*, N. Y. C.  
 Gilman H. Tucker, 753 Broadway,  
 N. Y. C.  
 Mrs. G. H. Tucker, 753 Broadway,  
 N. Y. C.  
 Mrs. G. Van Akin, 63 Park St.,  
 N. Y. C.  
 Miss Mary A. Veitch, 62 Hudson  
 St., N. Y. C.  
 Charles H. Verrill, Franklin, Del-  
 aware Co.

Miss Sarah J. Walter, Nor. Sch.,  
 Oswego.  
 Miss Martha Winne, 192 Elm St.,  
 Albany.  
 Miss Addie M. Woodin, White  
 Plains, Westchester Co.  
 Z. C. Westervelt, 263 North Saint  
 Paul St., Rochester.  
 John G. Wight, Cooperstown.  
 Oliver R. Willis, White Plains.  
 Wm. H. Whitney, 16 Astor Place,  
 N. Y. C.  
 K. N. Washburn, 753 Broadway,  
 N. Y. C.  
 W. R. Wilcox, Webster, Monroe  
 Co.

### SUPPLEMENTARY LIST OF MEMBERS FOR 1882.

WHO PAID ANNUAL FEES FOR THE YEAR ENDING JULY 1, 1883, AFTER THE  
 MEETING IN JULY, 1882.

John G. McNary, New York.  
 Thomas F. Harrison, New York.  
 Arthur McMullin, New York.  
 James Goodwin, New York.

William Jones, New York.  
 Paul Hoffman, New York.  
 Joseph White, Williamstown, Mass.  
 B. L. Butcher, Wheeling, West Va.

### NAMES ENROLLED AT WASHINGTON, D. C.

MEETING OF THE DEPARTMENT OF SUPERINTENDENTS, FEB. 1833, FOR THE  
 YEAR ENDING JULY 1, 1884.

N. C. Dougherty, Peoria, Ill.  
 Chas. E. Edwards, Baltimore, Md.  
 Geo. F. T. Cooke, Washington,  
 D. C.  
 Joseph R. Keene, Washington,  
 D. C.  
 James B. Johnson, Washington,  
 D. C.

Henry Randall Waite, Washington,  
 D. C.  
 Geo. A. Plympton, New York.  
 A. P. Flint, Philadelphia, Pa.  
 B. L. Butcher, Wheeling, W. Va.  
 John M. Birch, Wheeling, W. Va.  
 B. G. Northrop, Clinton, Ct.  
 H. M. Harrington

LIST OF LIFE MEMBERS WHO PAID THE ANNUAL FEE OF TWO DOLLARS AT  
 THE MEETING IN SARATOGA, 1883.

N. A. Calkins, New York; D. B. Hagar, Salem, Mass; Mrs. M. A.  
 Stone, New Milford, Ct.; R W Stevenson, Columbus, O.; Eli T. Tappan,  
 Gambier, O.; John Hancock, Dayton, O.; Andrew J. Rickoff, and Mrs.  
 R. D. Rickoff, Yonkers, N. Y.

### LIFE MEMBERS AT SARATOGA 1883.

Thos. W. Harvey, Painesville, O.  
 Aaron Gove, Denver, Col.  
 J. Dorman Steele, Elmira, N. Y.

Mrs. Albert Day, New York.  
 Joseph L. Pickard, Iowa City, Iowa.  
 Edgar A. Singer, Philadelphia, Pa.

# CALANDER OF MEETINGS.

## NATIONAL TEACHERS' ASSOCIATION.

1857. — PHILADELPHIA, PA.

Organized.

JAMES L. ENOS, <i>Pres.</i> ,	W. E. SHELDON, <i>Sec.</i> ,	
Z. RICHARDS, <i>Pres.</i> ,	1858. — CINCINNATI, OHIO. J. W. BULKLEY, <i>Sec.</i> ,	A. J. RICKOFF, <i>Treas.</i>
A. J. RICKOFF, <i>Pres.</i> ,	1859. — WASHINGTON, D. C. J. W. BULKLEY, <i>Sec.</i> ,	C. S. PENNELL, <i>Treas.</i>
J. W. BULKLEY, <i>Pres.</i> ,	1860. — BUFFALO, N. Y. Z. RICHARDS, <i>Sec.</i> ,	O. C. WIGHT, <i>Treas.</i>
	1861. — No Session.	1862. — No Session.
JOHN D. PHILBRICK, <i>Pres.</i> ,	1863. — CHICAGO, ILL. JAMES CRUIKSHANK, <i>Sec.</i> ,	O. C. WIGHT, <i>Treas.</i>
W. H. WELLS, <i>Pres.</i> ,	1864. — OGDENSBURG, N. Y. DAVID N. CAMP, <i>Sec.</i> ,	Z. RICHARDS, <i>Treas.</i>
S. S. GREENE, <i>Pres.</i> ,	1865. — HARRISBURG, PA. WILLIAM E. SHELDON, <i>Sec.</i> ,	Z. RICHARDS, <i>Treas.</i>
J. P. WICKERSHAM, <i>Pres.</i> ,	1866. — INDIANAPOLIS, IND. S. H. WHITE, <i>Sec.</i> ,	S. P. BATES, <i>Treas.</i>
	1867. — No Session.	
J. M. GREGORY, <i>Pres.</i> ,	1868. — NASHVILLE, TENN. L. VAN BOKKELEN, <i>Sec.</i> ,	JAMES CRUIKSHANK, <i>Treas.</i>
L. VAN BOKKELEN, <i>Pres.</i> ,	1869. — TRENTON, N. J. W. E. CROSBY, <i>Sec.</i> ,	A. L. BARBER, <i>Treas.</i>
DANIEL B. HAGAR, <i>Pres.</i> ,	1870. — CLEVELAND, OHIO. A. P. MARBLE, <i>Sec.</i> ,	W. E. CROSBY, <i>Treas.</i>

## NATIONAL EDUCATIONAL ASSOCIATION.

J. L. PICKARD, <i>Pres.</i> ,	1871. — ST. LOUIS, MO. W. E. CROSBY, <i>Sec.</i> ,	JOHN HANCOCK, <i>Treas.</i>
E. E. WHITE, <i>Pres.</i> ,	1872. — BOSTON, MASS. S. H. WHITE, <i>Sec.</i> ,	JOHN HANCOCK, <i>Treas.</i>
B. G. NORTHROP, <i>Pres.</i> ,	1873. — ELMIRA, N. Y. S. H. WHITE, <i>Sec.</i> ,	JOHN HANCOCK, <i>Treas.</i>
S. H. WHITE, <i>Pres.</i> ,	1874. — DETROIT, MICH. A. P. MARBLE, <i>Sec.</i> ,	JOHN HANCOCK, <i>Treas.</i>
W. T. HARRIS, <i>Pres.</i> ,	1875. — MINNEAPOLIS, MINN. W. R. ABBOT, <i>Sec.</i> ,	A. P. MARBLE, <i>Treas.</i>
W. F. PHELPS, <i>Pres.</i> ,	1876. — BALTIMORE, MD. W. D. HENKLE, <i>Sec.</i> ,	A. P. MARBLE, <i>Treas.</i>
M. A. NEWELL, <i>Pres.</i> ,	1877. — LOUISVILLE, KY. W. D. HENKLE, <i>Sec.</i> ,	J. ORMOND WILSON, <i>Treas.</i>
	1878. — No Session.	
JOHN HANCOCK, <i>Pres.</i> ,	1879. — PHILADELPHIA, PA. W. D. HENKLE, <i>Sec.</i> ,	J. ORMOND WILSON, <i>Treas.</i>
J. ORMOND WILSON, <i>Pres.</i> ,	1880. — CHAUTAUQUA, N. Y. W. D. HENKLE, <i>Sec.</i> ,	ELI. T. TAPPAN, <i>Treas.</i>
JAMES H. SMART, <i>Pres.</i> ,	1881. — ATLANTA, GA. W. D. HENKLE, <i>Sec.</i> ,	ELI T. TAPPAN, <i>Treas.</i>
GUSTAVUS J. ORR, <i>Pres.</i> ,	1882. — SARATOGA SPRINGS, N. Y. W. D. HENKLE, <i>Sec.</i> ,	H. S. TARBELL, <i>Treas.</i>
ELI T. TAPPAN, <i>Pres.</i> ,	1883. — SARATOGA SPRINGS, N. Y. W. E. SHELDON, <i>Sec.</i> ,	N. A. CALKINS, <i>Treas.</i>
T. W. BICKNELL, <i>Pres.</i> ,	1884. — SARATOGA SPRINGS, N. Y. H. S. TARBELL, <i>Sec.</i> ,	N. A. CALKINS, <i>Treas.</i>

## OFFICERS FOR 1883-4.

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THOMAS W. BICKNELL, Boston, Mass. . . . .	<i>President.</i>
H. S. TARBELL, Indianapolis, Ind. . . . .	<i>Secretary.</i>
N. A. CALKINS, 124 E. 80th St. New York, N. Y. . . . .	<i>Treasurer.</i>

### NATIONAL COUNCIL OF EDUCATION.

EMERSON E WHITE, Lafayette, Ind. . . . .	<i>President.</i>
THOMAS W. BICKNELL, Boston, Mass. . . . .	<i>Vice-President.</i>
ALBERT G. BOYDEN, Bridgewater, Mass. . . . .	<i>Secretary.</i>

### DEPARTMENT OF SUPERINTENDENCE.

B. L. BUTCHER, Wheeling, W. Va. . . . .	<i>President.</i>
D. F. DeWOLF, Columbus, Ohio . . . . .	<i>Vice-President.</i>
H. R. SANFORD, Middletown, N. Y. . . . .	<i>Secretary.</i>

### DEPARTMENT OF HIGHER INSTRUCTION.

J. L. PICKARD, Iowa City, Iowa . . . . .	<i>President.</i>
LEMUEL MOSS, Bloomington, Ind. . . . .	<i>Vice-President.</i>
JOHN H. WRIGHT, Hanover, N. H. . . . .	<i>Secretary.</i>

### ELEMENTARY DEPARTMENT.

F. LOUIS SOLDAN, St. Louis, Mo. . . . .	<i>President.</i>
W. N. BARRINGER, Newark, N. J. . . . .	<i>Vice-President.</i>
MISS ELLA CALKINS, 124 E. 80th St. New York, N. Y. . . . .	<i>Secretary.</i>

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E. C. HEWETT, Normal, Ill. . . . .	<i>President.</i>
J. BALDWIN, Huntsville, Texas . . . . .	<i>Vice-President.</i>
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### INDUSTRIAL DEPARTMENT.

C. M. WOODWARD, St. Louis, Mo. . . . .	<i>President.</i>
H. H. BELFIELD, Chicago, Ill. . . . .	<i>Vice-President.</i>
E. A. SINGER, Philadelphia, Pa. . . . .	<i>Secretary.</i>

### DEPARTMENT OF ART EDUCATION.

L. S. THOMPSON, Lafayette, Ind. . . . .	<i>President.</i>
W. S. PERRY, Worcester, Mass. . . . .	<i>Vice-President.</i>
JOSEPHINE C. LOCKE, St. Louis, Mo. . . . .	<i>Secretary.</i>

ADDRESSES  
OF  
NATIONAL EDUCATIONAL ASSOCIATION  
OF THE  
UNITED STATES.





## *EXAMINATION OF TEACHERS.*

BY ELI T. TAPPAN.

A child is educated by everything with which it comes in contact. Every circumstance of early life, the home, the neighborhood, the games and the tasks, all have their influence. But greater than any of these is the influence of human beings, the children who are play-mates, the men and women, the brothers and sisters, the father and the mother. The mother affects the education of a child more than all the combined material circumstances of life. A human soul cannot be truly educated by any instrument less noble than itself. Only by a diamond can a diamond be polished.

The work of a school is helped very much by proper material surroundings, grounds for physical exercise, houses well arranged and furnished. Pictures on the walls cultivate the taste. Music helps to soften the manners. Maps and apparatus and text books facilitate the acquisition of knowledge. It may be, as the Alexandrian school-master said, there is no royal road to science, yet these material aids serve to make a good turnpike of the public highway. But all of these combined are as nothing to the value of a teacher. With no books, no apparatus, and no furniture, Pestalozzi could do good work. His very necessities led to the invention of new motives, which made education a science. A skillful teacher does good work with no material aids; an unskillful teacher does poor work with the best. No other instrument of education is so important as the master.

Much deserved attention has been given to courses of study, and there has been great discussion as to what mental food is better calculated to strengthen this or that mental faculty. Here, also, the overpowering influence of the master is apparent,—for whether the subject be botany, or an ancient classic, or pure geometry, he may cultivate elegance of expression with vigor of thought, and lead the pupil by either path to love science and to strive for scholarship.

Once all education was in the hands of the church. Experience has shown that ecclesiastical organizations are not necessarily inspired with ability to conduct schools. Many of the best schools are under their control and are wisely managed, but this is not due to any peculiar virtue in the organization. Learned men, inspired with love and skilled in the art of teaching, make the school.

At the present day the state is everywhere assuming control of the business of education. This will meet with assent as long as good schools are made; that is, as long as the best teachers are employed. It will fail and be condemned whenever teachers are employed because they are of a certain party in politics, or of a certain denomination in religion, or whenever they are appointed on any other ground than the best education of the children.

All employees of the State must either be elected by the people, or appointed by other officers. Popular election is proper for those who are to represent in some way the sovereign power, either as legislators, or as principal executive officers. Appointment is the proper way for those who are to exercise some particular professional skill. Reason and experience teach us that the people cannot exercise a wise discrimination in the election of such officers, particularly at the same time that the chief executive or legislators are chosen.

This principle applies to all school officers, whether they be superintendents, examiners, or teachers. Their work is skilled labor. The skill and knowledge required can be obtained only by education and training. The higher officers, the superintendents and the examiners, may be selected on the ground of established reputation. In practice, superintendents for county and State are usually elected, but superintendents for towns and cities are appointed by boards of education. I believe that experience is in favor of appointment,—those superintendents who have been appointed by boards of education or other responsible officers have done better work than those who have been elected by the people. Of course, the rule has exceptions. Teachers are universally appointed by a board or committee, and there is at least a pretence of examination. As the necessity of such examination is conceded, I shall proceed to speak of,—1. Who should be examiners of teachers; 2. The object; and, 3. The method of such examinations.<sup>1</sup>

The examiner ought to be separate from the committee or board that appoints the teacher; for it is not to be expected that a board of education will be composed of experienced teachers, and certainly none others are qualified to examine candidates for admission to their profession. Nothing that teachers have to do requires so much skill as conducting an examination. The ordinary, well educated man, without experience in such work, is rarely able to make a fair measure of a candidate's knowledge of arithmetic; much less is he able to de-

<sup>1</sup> For the facts as to the laws of the several States for the examination and licensing of teachers, I am in debt to the circular recently published by the United States Commissioner of Education.

termine the candidate's skill in teaching the elementary branches. Even if members of the school committee were usually competent to examine teachers, the power should be in other hands. The party that employs the teacher, that makes the bargain as to salary, if he is also the examiner, is very apt to make the bargain first and the examination afterward. If the bargain suits the employer, the examination is apt to suit the examiner. Within my own observation, this has been the process; and I doubt not many have observed the same thing, it is so natural. The examiner should not only be separate from, but independent of, the board that employs the teacher. Any contract for the employment of a teacher who has not already been examined and passed, ought to be simply void. It is so ordered in some States, but this wise law may be easily evaded when the examiner is himself the employer or the employer's committee.

In all the States west or south of New York examiners are appointed for the county, and not for smaller divisions of territory; but in eight or nine States examiners may be appointed for a city or town or independent school district. In twenty-one States the county is the smallest district for examining purposes. In all the New England States the examiners are town officers, and (except in Vermont) they appear to be members of the town school committee. The geographical limit of this custom is marked. I wish we could have the results of observation made by competent persons, on this question of the size of a district for purposes of examination. My own experience is limited to the State of Ohio, where we have all kinds of districts. I have served as a city school-examiner in the largest city of the State, again as a State school-examiner, and again as a county school-examiner; also I have served as a member of a city board of education, and afterwards of a township board. My own conviction is that it would be an improvement if (except for large cities) the counties were united in groups for this purpose, usually three counties in one group. I believe that this has the approval of many of the best teachers who have given some attention to this question. The district should be large enough to make private and personal influence very improbable.

There should be at least two examiners,—better if there are three,—at every examination. In overseeing the work of a class of candidates, more than one pair of eyes are needed. In weighing results, more than one judgment is needed. In eleven States the examinations are conducted by single examiners. In one of these States the State Board of Education submitted copies of the same examination papers to a large number of county superintendents, who were the



examiners, requesting each one to examine and mark the papers and return them to the State Board. This was done, and the various markings compared. It was found that examiners differed in their judgment of the same answer by fifty or sixty, or even eighty, per cent. of the maximum attainable. Much of this was doubtless due to the incompetency of some of the examiners, and perhaps also to obscurity in the statement of the question; but I have known experienced, careful examiners to differ by twenty-five per centum in their judgments. However, such difference would generally be less than ten per centum after consultation and comparison of views. My conclusion is that the plan which is followed in most States, requiring a plurality of examiners, is more like to produce just decisions.

One of the examining board should always be the superintendent under whom the teacher is expected to work. No other person is as much interested in having a fair and just examination as the superintendent. If the candidate has had charge of a school, no one is in as good a position to judge rightly of his ability as the skilled teacher who has inspected his labors. This principle has received the sanction of experience. In twenty-three States the superintendent of the schools of the county or town is, by law, an examiner of teachers. Also, in a great many larger towns and cities, the superintendent is one of the examiners. In many cases the good influence of this arrangement has neutralized or overcome the bad effects of district examiners for small districts. For these reasons, and in view of what appear to be the teachings of experience, I suggest that the best way to constitute a board of examiners is to have it consist of the superintendents of three contiguous districts.

Before proceeding to discuss the methods of examination it is well to consider the object. This is, primarily, to determine whether the applicant may have license to teach in a public school. "Primarily," for the examination may be used to ascertain the relative merits of teachers in order to classify them, and assign to such his proper rank. This use of the examination is recognized in about thirty States, perhaps more. In twelve States there are three grades; in nine States there are four grades; in some States five or six; and in one State there are seven different periods of time for which certificates may be valid. Usually certificates on licenses are valid for a limited time, and the rank of the teacher is shown by the time of the certificate; but in several States certificates of two or of three grades are valid for the same time. There seems to be no prevailing method or established principle to govern the classification of teachers.

The first distinction to be made is between those who are not yet

recognized as teachers by profession and those who are so recognized. There are so few professional schools for the training of teachers that it is necessary, and will be for years, to allow many to begin the work of teaching who are only on trial. In four or five States certificates of the lowest grade are valid for a less time than one year, but generally the minimum is one year; and this is the better way, for these persons are supposed to be on trial, and six months is hardly long enough for the fair trial of a beginner. Some superintendents have advised that the teacher should never be granted a second certificate for a minimum period, and in one State at least this is the law. This may be, under some circumstances, good as a general rule when one of the board of examiners is the superintendent who has overseen the work of the candidate and can testify as to its success or failure. Where this has not been done, or where the failure is doubtful, it may be proper to continue the trial. Such trial certificates need not be all of the same grade; some may be for primary work and some for higher grades. Some beginners may have the literary and scientific attainments which are needed for an assistant in high-school work.

The conclusion I arrive at is, that those who show sufficient knowledge may be on trial, licensed to teach for one year, and the examiners should have the power at their discretion to renew this. It might be proper to renew for several years, if the teacher shows every year some decided progress. There must be more normal schools and better ones before we can limit the trial-period to a single year. Those who show to the examiners sufficient knowledge and sufficient skill to be admitted to the profession, ought to be admitted without any limit of time.

In a majority of States certificates are issued for various numbers of years; in two or three States even ten-year certificates are issued. There is no more reason in this than there would be in admitting a lawyer to practice at the bar for a period of ten years. I can see no more reason in a license for two years than in one for ten years. If the holder is on trial, one year is long enough, and if not on trial, there is no justification for placing a limit of time on the license. There may, however, be a limit of grade, depending on scholarship. In practice the length of time of a certificate depends almost always on the literary attainments of the teacher, and it is the result of an effort to classify teachers. But there is no justice in it.

I have known a woman, a gentlewoman, who possessed in a high degree the two essentials of a good teacher, common sense and a loving heart. Her scholarship did not reach high, but she was a good

teacher. Teaching was her profession, and she deserved a life-certificate as much as any of her examiners, but she was compelled every year to fret her honest soul with vile problems on higher arithmetic and syntactical analysis. Her examiners were honest men, and they knew her worth. They made a compromise between their sense of right and the time-system of grading; they ignored the ignorance of syntax, and every year issued a certificate for one year. The system ought not to make such compromises necessary. Every teacher known to do good work ought to have a certificate for life.

On the other hand, no amount of scholarship or of science can of itself make one worthy to be admitted to the profession. The college graduate, with the highest honors of the class, may be unprepared and unfit to teach others. Then the object of the examination of teachers may be definitely stated to be,—

1. To separate those who may not teach from those who may;
2. To divide those who may teach on trial from those who are finally admitted to the profession;
3. To ascertain in what subjects each teacher is competent to give instruction, and to grade accordingly both trial and life-certificates.

Of course, when teachers already having life-certificates wish to be authorized to teach a higher grade of school, they can be examined as to the new subjects.

The manner and the matter of the examination are indicated somewhat in the discussion of its objects. The subject-matter must, of course, include all of the course of study to the end of the grade in which the applicant wishes to be ranked. It must include more than this. To teach properly the mathematics of any grade, the teacher should know at least as much as is taught in the grade above. To teach anything well, the teacher should know more than is given in the text-book, for we do not know anything well unless we know what is around and beyond.

In addition to what is in the school course, the examination should include a knowledge of the science of education. Even those who have never taught and are candidates for only a trial-certificate, should have studied the science of education; they should have studied what is written by experienced teachers. It may be said that if this were insisted upon, in many parts of the country the schools would be closed for want of teachers. With sorrow I am compelled to believe this is so. Nevertheless, the rule is right. Its justice is so manifest that I do not see how to make it clearer by argument. We might as well admit lawyers to practice who have never opened a law-book, or physicians who have never studied medicine, as teachers who have

never studied the science of education. If we cannot apply the rule now, we can at least recognize its propriety, and we can try to make it possible. In the meanwhile, examiners may, with due caution, extend the trial period in certain cases.

Candidates for final admission to the profession should be examined on all the previous matter, and their knowledge should be more thorough than is required for those who are admitted on trial. Such a candidate should be able to explain and defend his own methods of government and instruction. In addition to the direct examination, the examiners should have before them a detailed report on each case by the superintendent who has inspected the candidate's school-work. They may learn something from the school records which the candidate has made. Also the evidence of the school committee, and of others, might be admitted, leaving to the examiners to determine its weight, as is done by other courts. This is the rule of evidence in courts of justice. A board of examiners exercises a judicial function. They are judges, and they may with propriety receive and fairly weigh all evidence that bears upon the fact which they are to determine.

In what remains to be said about the methods of examination, the judicial character of the work must be borne in mind.

The evidence given by the superintendent is of greater value than that given by others, because the superintendent is an expert; he knows better than the average member of a board of education what is good work done by a teacher. I have assumed all the while that efficient supervision is a part of the school system. There is no room in this paper for the argument of that question, farther than this,—there ought to be superintendents, even if there were no other use for them than to constitute boards of examiners.

Statements given by persons who are not teachers are of very little value. This is true of statements from teachers, if there is no opportunity to question the witness. Such evidence ought not to be admitted at all on a matter which the examiners can find out by examining the candidate. In West Virginia, the rule is announced that "no diploma or recommendation from a college president or faculty supercedes the necessity of an examination." This is in accordance with the established rules of courts in the admission of evidence. No candidate having the required knowledge has any cause to fear a fair examination. Diplomas from normal schools ought to be received on the same ground, allowing them their due weight, but not to supercede the necessity of examination.

When, in the board of examiners, the superintendent tells what he knows about the candidate, he is for the time a witness rather than a

judge, and he should state the facts, that his fellow-examiners may exercise their own judgment.

No person of bad or of doubtful moral character should have charge of children in school. The evidence of character required by examiners is frequently very flimsy,—merely certificates from persons themselves unknown. It was the custom of the first State Board of Examiners of Ohio to make an independent investigation, and obtain evidence entirely separate from the statements presented by the candidate before a certificate was issued. A life-certificate ought never to be allowed on merely one-sided testimonials.

There are several details of methods which I had purposed to discuss, such as a State board of examiners to supervise all the work of examination of teachers throughout the State; the relative value of oral and written examinations; the publicity of examinations; how far candidates may be trusted; the use of marks received at previous examinations, etc.; but already this paper is long enough. Suffice it to say, that the examination should be thorough, and it should be fair. There should be time enough, particularly for life-certificates, and when examiners are in doubt, they should not reject, but continue the examination till their judgments are satisfied.

A word about questions. I cannot too strongly condemn the foolish questions that are sometimes put. Our journals frequently amuse their readers with examples of silly answers, answers that are very ridiculous and deserve to be laughed at. But what shall be said of foolish questions? A foolish answer merely shows that one candidate is not fit to pass, but a foolish question is an injustice to a whole class of candidates. I have seen an "arithmetic paper" at a teacher's examination, in which one problem required the demonstration of a new proposition in geometry; and when it was done, the only arithmetical part of the solution was to divide 30 by 2. No candidate's blunder could be more ridiculous than the vanity of the examiner who invented such questions. Such puzzles do positive harm. They bewilder the candidate. Besides these harmful questions, there are many that are simply useless. Such are questions involving some controverted point. The answer, given either way, affords no fair means of judging of the candidate's knowledge. Such, also, are questions about some obscure item of knowledge, an exception to a rule in grammar, or the location of some insignificant town. Knowledge or ignorance of such a matter is no test. Every question should test, but not strain, the candidate's skill or knowledge.

In conclusion, where there are good teachers, there are good schools; there may be good teachers without a system of selection, but such

good fortune is exceptional ; in those places where there is no efficient system of examination (which is necessarily connected with supervision) there the schools make least progress. No possible system, no amount of expenditure could produce in one year, or in two years, good public schools all over the United States, because there are not enough good teachers, and they cannot be trained in one year or in two. The number of good teachers and good superintendents is increasing. It will increase more rapidly if there is a constant demand for such persons. That is the best system of schools which makes a steady demand for good teachers,—and that means universal, fair, and thorough examination.



## PRIMARY EDUCATION: WHAT AND HOW.

BY HON. HENRY A. RAAB.

When you ask the inhabitant of a city, "What school facilities have you in your place?" the answer will invariably be, "Oh, we have an excellent high school," as if secondary education were the principal concern of the community. The answer is generally given with a good deal of pride and satisfaction, but very rarely have I been told that the primary schools were excellent. If you examine the course of study for high schools, you will in many cases find that some elementary branches are taught in these schools; that spelling, penmanship, and elementary arithmetic form part of the curriculum; that the habits of discipline and study are anything but what we may reasonably expect in a high school.

These facts show that primary education does not receive its share of attention; that, in many instances, the top receives the good will and support of the people, the labor and fond care of the teachers, while the foundation, the primary school, the school of the great majority, is neglected. Hence all the shortcomings of the high school mentioned above; hence the want of intelligence and skill of the mass of the people. If any part of education deserves the fond care and cheerful support of the people, it is the primary school, for it is the school of the greater number; it is, also, not too much to say that, if the work in the primary school is of the right kind, the higher education will take care of itself; you cannot build a solid superstructure if you have not first laid a solid foundation. By these remarks I do not wish to be so understood as if I was hostile to the high school; no, I fully believe that the high school is a part of the common school system and deserves the good will and consideration of the citizens, as well as school officers. All I desire to say is, that the high school should not be fostered at the expense of the primary department.

I have proposed to myself to present in as concise a form as it is possible, in the space allotted, the *what* and the *how* of primary education, claiming for my paper neither novelty nor originality; for I am well aware that what I am going to offer has been felt and partly acted upon by conscientious, progressive teachers.

What is the aim, scope, and method of the primary school? This



eminently important question craves a definite answer, the more as we hear daily the most heterogeneous and conflicting demands made upon it.

One class of men demand that some agricultural science be taught in order to prepare our farmers the better for their work ; a second class thinks elementary political economy should find a place in the curriculum, so that future generations may judge the better the social relations of life ; a third class expects that the school prepare for the trades and industries, so that our young people find bread in shops and manufactories. Physicians desire that the school lay greater stress upon teaching the principles of physiology and hygiene, because the prevention of disease seems to them the most important ; lawyers lament over the flagrant ignorance of the laws existing among the population, — a late governor of one of our western states recommended in his annual message to the legislature that the penal code be made a text-book in the school ; the prohibition folks want instruction given in the use of stimulants and their evil effects upon the human system ; and thus complaints from every quarter are urged against the school. The school is made the scape-goat that has to bear all the burdens, and upon which every one heaps the blame.

It seems to me unnecessary, in addressing school-men, to argue that most of these demands which are made upon the school cannot be fulfilled, and will forever remain unsatisfied. You may enact the most magnificent laws on behalf of the schools ; there will forever be certain insurmountable barriers, which render it impossible for the common school to meet these demands. These barriers are partly founded in the imperfection of human nature in general, partly in the social conditions under which the children of the public school grow up, and partly in the average mediocrity of the intellectual faculties of children, and partly in the difficulty of class instruction.

The gentlemen who ask that the public school should realize their lofty ideals ought to visit some of the schools in rural districts, or in certain portions of our populous cities, where sixty and more children of all ages and stages of advancement, often from the most depraved families,— are crowded together ; they would soon be cured of their lofty ideals and be well satisfied, if the minimum of attainments laid down in our course of study could be reached. I hope that teachers and school officers will not be led astray by these conflicting opinions and demands, but will, like the pilot who looks to the polar-star and compass to guide his vessel along the cliffs and

through the shallows of the sea, steer their course into the port of safety. Our compass is the Science of Education, which tells us what to do, and what not, and what the needs of the school at present are. "And what are these needs?" you will ask. "What are the demands that to-day, more than ever, are pressed upon the primary school?" When I attempt to give an answer to these questions, I say candidly that I do not hope to be able to meet the expectations of all. I did not prepare this paper with this in view; for to satisfy all is impossible. I believe in the old adage, "Try to please few; to please many is evil."

Permit me now, in a few simple paragraphs, to indicate what I regard as the aims and scope of primary-school work from my individual standpoint, and what I consider the prime conditions of success according to the experience which I have been able to gain in my school work. I then ask the reader to examine and test my opinions without prejudice, and to put into practice what seems worthy of acceptance.

The first and most important requirement in the education of our children is the moral training; for what avails all knowledge, all ability, all learning, all skill, when the man's heart is depraved, and the will-power is exerted in the wrong direction? An old writer says: "On the day of judgment, the great Judge beyond the stars will not ask, What have you read? What have you studied? How many languages can you speak? How well can you preach?—but, How have you lived? What have you done? All great educators, from Montaigne down to Herbert Spencer, have considered the moral training of the young as the principal aim; and the great Teacher of teachers has expressed this idea by, "Be perfect even as your Father in heaven is perfect;" *i. e.*, be all that your powers enable you to be, live, grow, and perfect yourselves in the doing of noble acts, in living a spotless life. There can be no doubt the morality of youth must be the highest aim of all training, and to-day and in this free country of ours more than ever. I do not like to look at men and things through dark spectacles, but I ask, Is there not evidence that the virtues of faithfulness, of honesty, of truthfulness and strength of character ought to be fostered and cultivated?

How many persons are there now-a-days who act politely and kindly to your face, and behind your back talk evil of you,—nay, write evil of you, too! How many promises are made merely to be broken! Many are overflowing with words of honey, and at the bottom of their hearts they are deceiving themselves, and making a mockery of truth and honesty. Money, honors, and amusements are the idols

of our time, the moloch which men worship as the Israelites did the golden calf in the desert. People are over-anxious to make great fortunes in the shortest possible time in order that they may lead a life of ease and frivolity. Thence the speculations in stocks and grain-gambling, and "puts and calls," and the consequent defalcation and absconding clerks, treasurers, and cashiers. And this egotism, which respects nothing and finds its gratification merely in the possession of money and the enjoyment of pleasures and ambition, is fostered by the hot contests in politics and religion, where the good of the party or sect alone is concerned, and the welfare of the community is lost sight of; where power is the all-absorbing interest, and the individual is disregarded. The more we complain of this sad condition, the more needful it seems that we should emphasize rigid moral training and sound school discipline.

We teachers must contribute our share toward rearing the children to be trustworthy and courageous men and women, that cannot be bent and shaken by every breeze of the times. And, in the first place, we must counteract the vice of untruthfulness, the habit of lying in every shape and form. Children must be reared in veracity and sincerity. Then, the second demand is a love of solidity, simplicity, and frugality, — that we educate the children to despise all outward show and ostentation, because these latter pretensions and effects are untruthful acts, and certainly to be deprecated the same as untruthfulness in words.

Next, our young people must be taught to revere and honor authority, be it vested in men or in institutions. Read the reports of the daily papers, and you will see how crimes against life and property are everywhere fostered and produced by a disregard of the law. "Stranger, tell the Lacedæmonians that we lie here, *in obedience to their orders*," is the simple inscription placed on the monument erected over the dead bodies of the three hundred who fell in the battle of Thermopylæ. Obedience to the law is very little practised to-day; neither the statute nor the moral law is regarded; every one wants to do as he pleases; every one wants to be the law unto himself and others, but will not submit to the law of the State. Self-righteousness is the characteristic of the times. Hence the contentions against authority, the disobedience of employes against employers, the disregard of school and family, and the dreadful want of reverence toward old age and the venerable. Must I strengthen my assertions by example? You pass by the pupils just dismissed from school, and listen to the conversation of half-grown boys, and observe how even girls push older people from the sidewalk; how some talk

to well-meaning older people who criticise their behavior and upbraid them for their vicious conduct, and you will admit that the outlook is sad.

And what can we do, what can especially the school do, to check this wave of irreverence, frivolity, and lawlessness? In the first place, I wish to state here that great art is not necessary to accomplish this end. But one thing is needed; viz., that we ourselves bow under the discipline of morality; that we be honest and brave, faithful and true in all things; that we ourselves do the right with energy. To live an example has at all times been more successful than to talk an example; a live example does more than the dead word. Then it is necessary that in our schools we diligently take a stand for a rigid discipline, that we lay stress upon obedience and good training; cleanliness, truthfulness, chastity, honesty, trustworthiness, reverence, and fidelity must receive more prominence in our work than knowledge and skill. Knowledge and skill alone have never made men better, for men act not so much according to their reason as according to their feelings. Therefore it must be our constant care to ennoble the feelings, to reform the tastes. Knowledge and depravity may very well be sisters.

Without rigid discipline the above-mentioned ends can never be reached. All great men have been reared under a severe discipline. The freer the institutions of a people are, the more rigid must be their discipline.\* We cannot expect our free government to survive when the sovereigns are slaves of their appetites and tastes. Childhood is the time when the appetites and tastes are to be refined. It will not do to allow the children to grow up in willfulness and deceit, and to restrain the adult by stringent laws. What has become habitual in men, be it evil or good, cannot be easily perverted; for this reason the training to good habits is essential. This rigid discipline of youth must not be insisted upon in the school and family alone; it must pervade also our public life. Boys are to be kept under control in the streets and public places, and to be filled with regard for law and order. It is a calamity for the State *when reverence of law and order are lost sight of*. I cannot, therefore, join those teachers who say, "What my pupils do outside of school does not concern me." If we consider the school as an organism, every transgression of the law by a member, or part of this organism, reflects upon the whole. The evil conduct of pupils in public helps to weaken the authority of the school. "What does not concern me, cannot burn me," is a bad maxim. The question whether the teacher ought to take any notice of the transgression of the laws by

his pupils in public, seems to me like the question, "Is it lawful to heal on the Sabbath day?" Whenever we can promote the prosperity of the people we should do our share, whether it be done in school or out of it. This is what our public schools should attempt and carry out as their principal aim: strict education in morality, and rigid discipline.

But our schools are not only educational institutions, — they are also created for the intellectual training of youth; and in view of this we are justified in asking, "What is the most needful in this regard?" In pondering over this question carefully, I come to the conclusion that the answer is of a double nature: (1) Our children must learn to work cheerfully, and (2) our children must learn to enjoy work, feel pleasure in working. The instruction in school must be so imparted that our children learn to work. Yes, to work; for to be able to work is the demand of the times. The evils of society in our days are fostered and promoted by the desire of men to become rich without labor, merely by their wits; and many have lost their hard-earned pennies, and, what is worse, their energies, by speculation. But the penalty had to come,—for, that man shall work is a divine law which cannot be violated without punishment. We live, in fact, only when we work; for life is work, and work is life. Says the Psalmist: "The days of our years are threescore years and ten; and if by reason of strength they be fourscore years, yet is their strength labor and sorrow." And I am inclined to add, what would they have been had they not been labor and sorrow? They would have been nothing, — not worthy all the joys and all the sorrows. The happiness of man and of nations consists in labor, judicious labor, labor for the good of others and the whole. If these assertions are true,—and experience proves them to be true,—it is the duty of the school to educate its pupils to work; that it *tolerate no idleness and lounging*, and that it employ the children in a rational and appropriate manner, that in all the branches of instruction self-activity may be fostered in the fullest sense of the term: that it train not but one power of the soul, but that it appeal to all the powers; that it take hold of man and cultivate all his faculties; that it arouse the intellect, his thinking, feeling, and willing; and that by work it educate *to* work. The greatest evil in school is indolence. For this reason he is not the best teacher who knows most, but he who knows how to teach the children to apply themselves vigorously to their tasks.

It is a crime against human nature to send children to school merely that they may learn to sit still. During the instruction the teacher must arouse the interest of the pupils, ask short questions, and insist

upon full, definite answers ; not speak too much himself, but see that the pupils exercise their powers of speech. The more the teacher contains himself, the less prominent he makes himself in his instruction, the freer the child will develop, the better his faculties will be exercised. It is a sad spectacle to go into a school where the teacher does all the talking and the pupils are made inactive by mere listening. Another principle ought not to be forgotten : We must not make it too easy for the children to acquire knowledge ; not by play, but by hard work, can they acquire truth. Only what man has worked for, becomes his own, his lasting property ; teachers should, therefore, not present the subject-matter "cut and dried" on a tray, but cause the pupils "to seek and find" truth. In every case the children should be diligently questioned so as to develop their ideas ; should be vigorously examined and tested ; and then everything should be practised to perfection, because only what has been practised carefully is a basis of progress, is of any use in after-life. A little thoroughly learned is more than a great deal carelessly acquired. Jacotot never uttered a greater truth than when he said : "You are not a scholar when you have learned something, but you are a scholar when you remember what you have learned." And another one : "Three times you learn and three times you forget a thing, in order to remember it the fourth time." No hurry, then ; no locomotive rapidity, but quiet, circumspect and thorough work. Yes, let us take care that the children may learn to labor vigorously. and that they may be trained to labor by labor. No man can have success in life if he has not learned to work, and even genius without work is no blessing to mankind. Industry and perseverance are indispensable qualities of the citizen. But we require also that work be done in a rational way. Man must, therefore, be led to think. A man that labors without thinking is on a level with the ox in the treadmill. Thinking alone cannot elevate man to his destiny on earth. This seems so self-evident that further argument is unnecessary ; and yet, it is to-day more needful than ever to repeat this maxim, "Test the minds !" I will not speak of the many superstitions prevalent among our people, causing loss of life and property ; how many who are classed among the *better*, resort to patent medicines and nostrums, seek a cure with quacks and wise women, instead of consulting a reputable physician ; but I wish to point out evils arising from sensations and commotions created by social, political, and religious itinerant agitators who delude the people. All this is possible only when men cannot think clearly, when they cannot judge, when they are not practised in understanding arguments,

when they do not realize the effects and consequences of their actions beforehand. I am well aware that the school cannot satisfy all these demands, that it cannot do everything; but I know, too, that much may be done in this direction by a rigid instruction that dispels superstition and credulity, by giving a knowledge of facts in such a manner that, at the same time, it becomes judgment.

When we consider how reading is still taught in a great many schools, how children are permitted to stumble over the piece, or how, in many instances, they imitate, parrot-like, the elocution of the teachers without comprehending the sense, need we wonder that, notwithstanding the press and an abundance of cheap, good books, so few people get any good out of their reading? And, then, how unmusically is poetry recited by the children? Can the child, by such such exercises, be raised intellectually? Is it led to think properly? Is such lip-work reading, *i. e.*, taking in the sense of the author?

Is it not expressly said in the Scriptures, "Understandest thou what thou readest"? and is not the definite answer given: "How can I, except some man should guide me?" It is similar with regard to reading-lessons in schools, which are not discussed nor explained, no questions asked except, mechanically, those in the foot-notes, if teachers would but ask, Who? What? Where? When? Why? How? etc., by such practice a good deal might be gained. Then the practice ought not to be forgotten that the pupils write down in simple form the result of their discussions and conversations; for when they know that they will be asked to do this, they will be more interested and attentive in the reading of the lesson. We must remember that in composition-writing success is obtainable only when the pupils have (1) practice, (2) practice, and (3) practice. To write a composition once in two or three weeks is not sufficient: *daily* exercises alone can secure tangible results.

In turning now to the second standard study, I would ask that the teachers spend not so much time in requiring their pupils to do long, difficult problems, which often take an hour or more for their solution, but rather take pride in causing the pupils to solve clearly and exactly a hundred easy problems in an hour. It may be that dependence upon the text-book is in the way of teaching arithmetic properly, the teacher striving for results rather than solutions; it may be that the slate-work has to a great extent superseded the oral work of former days; it may be that vigorous thought is repugnant to the easy-going playful habits of the times: the instruction in arithmetic is not what it ought to be, and this state of affairs demands a thorough investigation. One thing especially I wish to emphasize: development

and demonstration, and a familiarity with numbers up to 100 at least, are the basis of success in arithmetic.

I might here speak of a great many things, of the instruction in the Natural Sciences, which are principally calculated to foster vigorous consecutive thinking and to dispel superstition, — but what I have said is sufficient. One caution, however, seems not out of place, — that to know a few things well is decidedly preferable to skimming over a great many things hurriedly; *non multa, sed multum* has even to day not lost its force. At dinner-table the wise man selects from the sumptuous bill of fare such viands as are digestible and wholesome; the dainties and tid-bits spoil the stomach: in the same manner the teacher must choose from the catalogue of branches such as can be easily assimilated and make the child grow intellectually. If you practise upon a few worthy things thoroughly, and by them discipline the minds of your pupils, you have done your duty; your pupils have learned how to learn.

As a true friend of the public school, I ask you to receive my opinions and monitions in the same kind spirit in which they are offered. We must fight against those arch-enemies of human happiness, against ignorance and stupidity that cost our people large sums annually; we are to promote clear thinking and a keen perception of existing facts and conditions; we are to be the custodians of the erudition of the mind and the ennobling of the race, of the education for rational work by work. And another request: Our children shall not only learn to work in thinking and to think in working, but the instruction must be so imparted that they feel pleasure in learning and that they work joyfully. Not the intellect alone, but also the heart, requires its share of culture. How may this be accomplished? The world to-day is full of men of embittered and pessimistic views. You see so many long-drawn faces that it becomes a matter of importance to ask, How may our youth be preserved in its happiness and gay spirits which enable them to conquer the vicissitudes of life and to come out of the battle victorious? By further investigation and observation we detect that nothing but rational work is the main-spring of happiness and blessing; but do not let us forget that *successful* work really gladdens and cheers man's existence. Wherever there is no success in work, there is no satisfaction; and the words of God to Adam after the fall, are especially characteristic: "In the sweat of thy face shalt thou eat bread, and thorns also and thistles shall the ground bring forth to thee." Not that man shall eat bread in the sweat of his face, is the penalty, but that the ground shall bring forth thorns and thistles, that he shall have no outcome from his work.



Wherever such work without prosperous results is man's lot, he cannot labor to his satisfaction ; he cannot enjoy peace and happiness ; let us, therefore, take pains that our children may feel the satisfaction which accompanies successful work. One of the advantages claimed for kindergarten work, and one which even the opponents of Fröbel's system have to acknowledge is, that quite young children feel the satisfaction of successful labor, because every one of the kindergarten occupations admits of tangible results from the work expended on it. Do not let us give the pupils anything for which they have no use in after-life. Let us select the typical and most essential from all the branches, and by these exercise their skill and discipline the children's minds. Too many things spoil the stomach. Let us only give them matter calculated to educate the mind, — good, plain fare,—no confectionery. When a careful selection has been made, let us present the food according to dietetic rules. Do not raise your standard too high, do not impose tasks that overtax the pupil's powers, do not burden nor discourage them by exacting demands which they, even with good will and strength, are unable to fulfill ; rather short and easy lessons which may be well and surely learned, than long and difficult tasks which torture them and allow them to work without success. Rather give them few poems well chosen, and let them be so well learned that they become the inalienable property of the children, and thus may be a source of joy to them, when they have become old men and women.

*"Repetitio est mater studiorum."* Do not neglect repetition and the necessary drill. A teacher who neglects them can never obtain the highest results. The field of his school will bring forth thorns and thistles to him ; and it is no wonder, if the children lose all happiness and work but unwillingly. Children that are not bright and smart deserve the teacher's most loving care. When there are such weak and dull children in your school, have special patience with, and care for, them ; the bright and talented ones learn without special effort on your part. Do not extinguish the love of work in these weak ones, but fan it into a flame. Many teachers scold and abuse the weak ones, calling them hard names and telling them they are good for nothing and will never make their mark in the world. Continued reproaches of this kind are too apt to stifle all effort on the part of the children, and finally they lose all self-confidence and give up in despair ; they do not expect ever to amount to anything. If they are not dull, yet they lose all courage for further exertion. They finally believe what the teacher tells them and become sullen and morose. The great benefactors of the world were not the so-called

bright school-boys, and many examples could be given of good and great men who, had it been left to their teacher's prognosis, would never have risen from the slough of mediocrity. Do not despise the stolid, slow children, and do not believe that the bright ones will be of most use to the world. If one could get statistics from the higher institutions of learning on this point, we might obtain some interesting disclosures; we should find that the pupils who were considered the smartest and brightest in school have by no means become the most useful men. For this reason, train every faculty even the weak one; give each an opportunity to develop and to enjoy the blessing of progress in little bits. Successful work alone can make man happy and blessed.

And another demand! children can be happy only when they feel that their teacher loves them. Children have a very fine sense for detecting the love of their teacher. They ask for love; for they were made to be loved. But it is not necessary for a teacher to tell them continually of his love for them; when the teacher's love is genuine, the pupils know it without words. In a school where love dwells, the teacher may be strict—*O so strict!*—and the children love him nevertheless. But in order to be successful, love must be coupled with justice; love must be consistent. This becomes evident especially in the matter of punishment. He only ought to be privileged to administer punishment who punishes lovingly, who punishes to reform. The rod is most effective in the hands of the teacher who loves his pupils best. Love and true happiness can be found in school only, when the teacher loves his profession, when he is filled with holy enthusiasm for his cause. The worst drawbacks for the success of a teacher has ever been discontentedness, moroseness, and a soured temper. I can not help acknowledging that the teacher's calling in many respects is a difficult one, and that neither money, nor honor, nor respect, are lavished upon him; but I cannot believe that the teacher's condition, in school or out of school, is improved by bitterness; that he may have better success, or rise in the estimation of his fellow-men, by complaints. When a teacher's heart is filled with joy, when he works cheerfully and lovingly, the children cannot help catching this love and cheerfulness; then they will like to work also, the parents take an interest in the school, and the moral conquests which raise the profession in public esteem will not be wanting. On this point I might add a great many things, but I must stop for fear of transgressing the limits of this article. Yet before I close, I wish to recapitulate my demands in short, tangible form.

The first requisite of the public school is rigorous discipline, and

strict moral education in truthfulness, righteousness, honesty, and conscientiousness, in duty, decency, and reverence. Wherever these virtues are neglected, the intellectual acquirements will resemble the rays of decaying wood, which emit light but never warm. In the second place, our youth need rigid intellectual training, an instruction which comprehends all the faculties, which teaches to work and to love work. I emphasize especially severe logical thinking and a correct expression of thought in speaking and writing. The pupils must be enabled not only to comprehend, but also to represent ideas properly. To this training of the intellect must be added a culture of the heart. Children must be guided in such a way that labor is joy to them, and that they are happy in rational, successful work. The teacher must be the example by which the holy warmth is kindled, which renders what is difficult easy, and the burdens light.

These are some general principles which, I hope, you may indorse. I believe I have not uttered a sentiment that you have not felt and acted upon in your schools; yet I thought that, by repeating them, I might encourage you in your labors and point out the manifold blessings that you may bestow on the rising generation. If you educate your pupils according to these principles, the public school will fulfill its mission; the education of the people will lead to national prosperity, to national happiness; the outcome will be good citizens and, what is more, good men and women.

Shortly after the invention of the art of printing there sprang up in Flanders a family of printers, who soon brought the art to such perfection that, even to-day, their prints are unsurpassed. Their trade-mark was a pair of dividers, one foot of which was fixed and the other moving around on the globe; the motto was, "*Labore et constantia*," by labor and perseverance. A later member of the firm added, "*Pietate et prudentia*;" by piety and prudence. Let us labor, then, and persevere; let us teach our pupils to labor and persevere, and prudence and piety will be the result.

## *EDUCATION OF THE HEART.*

BY HENRY H. FICK.

The mystic power of three asserts itself in man's organization. Human nature is tripartite,—intellectual, physical, and moral. Mind, body, and soul,—three in one,—are welded in him who enters life. Threefold, therefore, must be the aims of that gradual developing which finds its culmination in the nearest possible approach to perfect humanity. It is an accepted doctrine that the educator should not merely bestow his care upon the cultivation of the intellect,—the mind,—but should keep in view as clearly the training of the physical powers, and concern himself not less faithfully about the education of the heart.

The emphasizing of the need of harmonious, complete, all-embracing education is merely a reiteration of the statements of the most eminent ancient and modern philosophers. Twenty-three hundred years ago Confucius believed the destiny of man to be the "completion of his nature;" and Pythagoras said, "Harmony in everything: that is the goal for which every human being ought to strive." It is impossible to improve upon this old-time definition of the purposes and ends of education. Nevertheless, no one will assert that the demands thus concisely formulated by the great teachers of antiquity are being satisfied by their modern followers, and that to-day's educational labors are in truth directed toward uniform mental, moral, and physical development. Public sentiment does not acknowledge the exigent demands of the triple alliance; it has set an unwarranted value upon the semblance of an accumulation of knowledge, and hence there is witnessed a species of idolatry of purely mental culture. The early forcing of the mind, not the healthy development of the whole man, receives the greatest amount of attention. From programs and schedules of instruction, only the existence of the head may be inferred, into which information much too previous is dropped as bales of merchandise are put into the hold of a vessel. Our matter-of-fact age worships the dollar, and countenances the belief that mental power will furnish traps with which to catch the bird laying the golden eggs. In blind folly it apes old King Midas, who, when Bacchus had promised to grant him the fulfillment of any wish he might express, desired that, at his touch, everything might be changed into gold. The first trial of the newly-gotten power brought trouble

to the greedy king ; for of what use a gift which transformed into solid metal the wine he wanted to quaff, and changed into a lump of yellow ore the bread that was to appease his hunger? The coveted power, when gained, proved a curse to the mythic monarch ; much as the prized gifts, strength of mind, and intellectual dexterity are to those who rest upon naught but the glittering shield of Minerva. Knowledge alone, however far-reaching, is not a sufficient preparation for the duties of life. There are aims and aspirations higher than the balancing of ledgers and the calculations of business investments. There is something above the treadmill drudgery of the struggle for existence ; something which really makes this life worth living, and without which our stay here upon earth is at best but a farce with a tragic ending. It is true that the modern age has revolted against the ascetic notion of the unholiness of the flesh, and so the attempts to strengthen the soul by killing the body, have been abandoned ; but while the mind is cared for and the body receives attention, upon the sensibilities, the finer feelings, the character, is bestowed but passing notice.

Yet an athlete may be a dwarf in wit ; Hercules, a most atrocious ruffian ; and Phryne, beautiful as Venus Aphrodite. Cæsar Borgia added to the reputation of being the handsomest man of his time, the fame of being also the most criminal ; and though Socrates was as wise as the oracle, he was a scarecrow in ugliness. An intellectual prodigy may be morally a cipher, blackening the fairness of his name by low and shameful vices. "Mind without heart, intelligence without conduct, cleverness without goodness, are powers in their way, but they may be powers only for mischief."

"Talents, angel-bright,  
If wanting worth, are shining instruments  
In false ambition's hand to finish faults  
Illustrious, and give infamy renown."

Yet there are men, even if, "like angel's visits, few and far between," who, though not noted for social position or scientific standing, tower in moral grandeur compared with which physical beauty and mental attainments lie low. These are the men whose capital is their virtue ; and has it not been said, "A handful of good-will is worth a bushel of wisdom" ?

A century has elapsed since the philosopher Kant wrote : "We are living in an age of discipline, culture, and civilization, but not in a moral age. If we take into account the present condition of mankind, we are almost forced to believe that the rise of empires and

states is concurrent with the misery of the people. The question yet remains unanswered whether a primitive condition would not be a happier state, uninfluenced by modern culture. For how is it possible to make men happy by mere schooling, if their heart is not at the same time, educated and cultured" ?

We have not advanced one step beyond the stand taken by the author of the *Critique of Pure Reason*. Let it be granted that this want of morality (spoken of by the sage of Königsberg) is less apparent. Is that a proof that the cankerous inroads of immorality have been checked? Let it be acknowledged that crimes have lost much of the fiendish brutality which marked them in former times,—can it be denied that they make up for that loss in their present subtlety and hypocrisy? Statistics show a decrease of crimes against the person, it is true, but they also bear witness that misdemeanors and civil wrongs, breaches of faith and trust, have increased in an alarming ratio. There may be less barbarity, less daring highway robbery, but there is an alarming preponderance of genteel rascality, of kid-gloved knavery, of that wrong-doing which substitutes slyness and lying for boldness and violence. Forgery, perjury, breach of promise, false pretenses,—all require, not physical force, but mental capacity. These are not so much products of chivalry; they are essentially modern iniquities. The inordinate desire for wealth and distinction leads to the most ruinous practices, and sanctions selfishness by the dishonest maxim that "all is fair in trade." To how many persons may be referred the forcible terms applied by Sir Henry Moncreiff to a man with whom he had many dealings: "He is a clever man, a kind-hearted man, and he seems to be a religious man,—in short, an excellent man,—only somehow or other, he is sadly deficient in common honesty."

It is not true that the well-stocked mind is a safe guard against the inroads of evil thoughts; on the contrary, if formerly ignorance led to crime, now-a-days a one-sided education,—an over-education in one particular direction, to the exclusion of everything else,—may be charged as the chief cause of moral turpitude. Extraordinary skill and uncommon attainments are frequently turned against those they ought to benefit. Many glaring cases bear emphatic testimony to this fact. Counterfeiters, working under trying disadvantages, deprived of the many aids and resources of the legitimate workman, have produced spurious notes and coin at an expense of marvelous skill. Witness the case of Doctor Lamson, executed two years ago in England. The talented son of a prominent divine, he commanded respect in society. His services in the Franco-German war had brought him

honorable recognition, and after all, the want of moral conviction led him to the gibbet at Newgate as the murderer of a crippled relative. Witness Ruloff at Binghamton, who committed murder in order to obtain means for the prosecution of his studies. The ingenuity often displayed by criminals would insure their employment as experts in honorable callings.

Examples might be multiplied to show the fallacy of the belief that mental development is of supreme and all-including importance in education. "The best head, added to a wicked heart," says Tegnér, "is a treasury over a robber's den." There is less need of brilliantly-flaring, intellectual sky-rockets, than of less dazzling but steadily-gleaming tapers.

"The world wants men,—true men,—  
Who cannot be bought or sold ;  
Men, who will scorn to violate trust,—  
Genuine gold.  
The world wants men,—pure men,—  
Free from the taint of sin ;  
Men, whose lives are clean without,  
And pure within."

Good moral character,—and I mean by the phrase not simply the absence of striking wrong-doing, passive goodness,—but the *effective* possession of sterling qualities and virtuous habits, has certainly risen in market value. The scarcity of the article is endangering the fabric of civilization. Would not corporations and firms, compelled to handle large sums of money, willingly pay larger salaries than usual, if assurance could be had of the absolute reliability of cashiers and confidential agents? Systems of education are unworthy of support by taxation, unless they adapt themselves to this fact. "Out of the heart are the issues of life." The poet Saxe beautifully expresses it:

"The head is stately, calm and wise,  
And bears a princely part,  
And down below in secret lies  
The warm, impulsive heart.

The lordly head that sits above,  
The heart, that beats below,  
Their several office plainly prove,  
Their true relation show.

The head erect, serene and cool,  
Endowed with Reason's art,  
Was set aloft to guide and rule  
The throbbing, wayward heart.

And from the head, as from the higher,  
Comes every glorious thought;  
And in the heart's transforming fire  
All noble deeds are wrought.

Yet each is best, when both unite  
To make the man complete:  
What were the heat without the light,  
The light without the heat?"

To temper the intellect by emotive qualities, to awaken altruistic feelings, to bring business thoughts into the surview of a wide social economy, seems one of the main functions of education, in this sadly materialistic age of steam-presses, electric-lights, and telephones; in an era which travels by steam, writes by the aid of lightning, stereotypes the sunbeam, and flashes speech around the globe. Oh, how grand a vantage-ground for the true Millenium!

Acting upon Goldsmith's warning,

"Ill fares the land, to hast'ning ills a prey,  
When wealth accumulates, and men decay,"

the true school will consider it a duty to counterbalance, as much as possible, the hereditary, or instilled selfishness of outer-life, and to supplement the world's cry, "Put money into thy purse," by the words "and kindness for all into thy heart!"

The conscience, not the purse, after all is the real citadel of a nation. "It is wiser philosophy," says a great writer, "to make the heart virtuous than the blood to run cold." How shall it be done?

Man is a reflex of the *habits* of his ancestors, *modified* by the *exigencies* of his *own surroundings*. *Moral habits* and *ethic principles* cannot be imparted by verbal statement, like principles of arithmetic or rules of grammar. No amount of text-book memorizing, parrot-like gibberish, will accomplish the end. Moral training has been theorized about and philosophized about too much, and practiced too little. Less *profession* is needed, but more *practice*. The heart is educated in exactly the same manner which is adopted in the case of the hand, the muscles, the eye. You cannot put together character, as you may the different pieces of a Chinese puzzle, but you may develop it and unfold it by constant example and direction. A true teacher may be likened to the sun, whose rays call forth grasses and flowers upon the meadow, but also responsive answers from the column of Memnon.

Magnanimity, candor, charity, industry, generosity,—these graces can never be set in children by teachers who are deficient themselves



in them. Is it reasonable to expect that pupils will cherish Truth as a priceless jewel, when they listen to their teacher's evasive and prevaricating answers? The unfortunate system of demerits, credits, and per cents, I am afraid, works untold harm in this connection. The pupil's standing is based upon his marks; the teacher's reputation is staked upon work, which can be expressed in decimals. Whatever cannot be made to figure in statistical tables, is ignored. It will be urged that *all* instruction has an elevating, ennobling tendency. This is undoubtedly true of instruction in the best sense of the word; but it does not hold good in the case of the mechanical, soulless performances of many so-called teachers. Where are teachers, I ask, who possess enough courage and respect for their profession, not to quail before the terrible Juggernaut of examinations? Where are teachers who do not fear to face the odium attaching a failure to answer eighty out of a hundred catch-questions, if they are conscious that they have labored faithfully for the mental, moral, and physical betterment of their wards; conscious that they have tried to give them not only knowledge, but above all, to awaken in them "thoughts which breathe and words which burn"?

The majority of teachers, knowing that, all declarations to the contrary notwithstanding, the so-called "solid" branches count in transfers, hold themselves in duty bound to obtain per cents., and think little of the cost. Does not this set a premium upon dishonesty, and openly indorse the maxim that only he is punishable who allows himself to be caught? It teaches that a deviation from the most direct route to the end of the syllabus is attended by disastrous consequences; that loitering in the work of gathering some knowledge from textbooks avenges itself on the day of examination; and falsely asserts, that the unseen but lasting good done by impressions upon the heart vanishes into air, and, as compared with the per cent. sacrificed, is an *ignis-fatuus*, a Will-o'-the-wisp. This is the reason why incidental instruction is neglected; why the teacher adheres slavishly to the prescribed course of study. It explains, furthermore, the idolatry which is carried on with the "staple" studies, arithmetic and grammar, and the slight put upon studies which, like history and literature, music and drawing, appeal to the feelings and to the imagination. Mathematics and grammar, it is true, will accustom to accurate and logical reasoning,—will serve as the grindstone of the intellect, aside from their great practical usefulness; but they are one-sided, foreign to sublime aspirations, and do not touch life's most important relations, the conditions of spirit-grandeur and calmness, called happiness.

Goethe was right in the following statement: "Those sciences cannot wipe out prejudices, cannot mitigate obstinacy, cannot appease partisanship, for they are deficient in ideal and ethical spirit." Persons who neglect them may run the danger of becoming fantastic weaklings; but those who cultivate them to excess, are apt to grow into cold narrow formality,—so much so that, as a friend of mine affects to believe, even their bones after death will be found arranging themselves in geometrical figures.

Far be it from me to detract one iota from the importance of severe mental discipline. It is not the regulated, healthy studying which carries off the prize. Examinations, both of pupils and teachers, are little more than a lottery of catch-questions; and he who dreamed the lucky numbers, or chances to walk the examiner's special path, secures by it the scholar's prize, the teacher's certificate, or the collegian's degree. Moral worth ought to be rated far higher than answers to set questions. Conditions in existing state of affairs, which leave the educators of youth annually at the mercy of local politicians and ward delegates, will ever prevent the ideal test in examinations of candidates; a view of the actual school status. Under the present school system, there is hardly a check upon the introduction of poor but influential teachers, yet one unfaithful teacher over a class of children is as the tempter in Paradise. The terrible responsibility of his position is aptly illustrated in a Russian story:

"Once upon a time, two souls arrived in the lower regions to suffer the consequences of their misdeeds upon earth. The one, in life, had inhabited the body of a cruel robber and cut-throat, who had openly arrayed himself against his fellow-creatures, and was guilty of the most heinous crimes. The other was the soul of a teacher, who had not used to the best advantage the privileges of his office, but had been derelict in his duties to the children under his care. Each, upon arrival, was hurled into a separate huge cauldron, under each of which crackled a blazing fire. Ages passed. The fire under the robber's tank gradually sank and died away; but the blaze under the neighboring cauldron continued unabating. At length the tortured spoke up, complaining of the manifest injustice of the punishment meted out to him, as compared with that of his companion. Then a voice made answer: 'Ponder upon the magnitude of thy wrong-doing. Lo! the robber and murderer simply stole what, sooner or later, Nature takes away; but thou didst kill opportunities of improvement; thou didst steal multitudinous chances of good. The subtle poison which thou didst allow to escape has crept into crevices and nooks and, festering there, has bred loathsome pestilence, and all eternity

cannot remove its taint. Seest thou now the justice of thy prolonged damnation?' And the flames rose higher and resumed their dance around the white-hot cauldron."

The school is only one factor in education. Added to its work must be the influence of home and that of the outer world. During the pre-school age, the mother is the chief moral educator. With the child's entrance into the school-room, the teacher's influence becomes fully as strong as that of home. It is peculiarly strong and momentous, because it exerts its formative power during a period of transition from the narrow circle of home to the ever-widening arena of public life. Not very many parents are able, or feel disposed to acquaint themselves with the details of their children's education. They throw the entire burden and responsibility upon the teacher. Into the theatre of the class-room are gathered daily from forty to sixty children, coming from widely-differing homes. The true teacher—one who looks upon his calling as a sacred trust, and does not profane his office by mercenary considerations,—sure that the *intellectual* harvest will not fail,—undertakes the *moral* training with reverence and confidence. He knows that his work in this direction will count when youth has turned into age, and book-teaching has long been forgotten. "Man," as Bacon says, "is a composition of habits," and Metastasio, ignoring special transmitted germs, writes: "All is habit in mankind, even virtue itself."

And so, after all, to lead the child to *see* what is right and to *understand* what is wrong is not so very difficult a matter, provided we have the right *examples*. But it is difficult, with the mixed examples before them, to bring them always to *act* in the direction they *know* to be proper. The majority of pupils do realize the wickedness of lying, yet how few will not yield to the impulse of trying to escape censure or punishment by denying the truth. Doing good must be practiced. The mind, condemned to solitary confinement, becomes imbecile; the sturdy arm of a blacksmith, if carried in a sling, ere long loses its strength. *Moral feelings not developed and cultivated by doing, die of inaction.* The educator's care must not only be to impart the moral, the true by words, but to render the same active by exercise and example. Teachers who understand the art of turning the events of daily life into object-lessons for the advantage of their pupils, will find ample opportunity. What glorious lessons on the beauty of charity and liberality might be drawn, and undoubtedly have been drawn, from the floods which, abroad and at home, brought misery, yet appealed not in vain to the generous spirit of our people! A wealth of generous ideas and humane feeling could have been brought in the wide field of unselfish love by the child's mite!

Parables and anecdotes should frequently be interwoven with the threads of imparted information. How many moral lessons may be taught from history! The sacredness of pledges and vows may be illustrated by the story of Regulus, whom moral sense of duty influenced to return to Carthage, where he knew that torments and ignoble death awaited him. What more forcible tale of submission under the law can be found than that of Socrates refusing to escape from prison, and cheerfully drinking the deadly hemlock, to which a partisan justice had condemned him? There is moral grandeur of a high type in the conduct of Fabricius, who rejected with horror the overtures of a physician to poison his antagonist, Pyrrhus. Who doubts that telling how Petrarch's simple word was accepted as equivalent to the oaths of others, would deeply touch the heart of children, and though it might cause a break in the train of studies, by its direct influence, cause immeasurable good? And, to come nearer home, neither history nor poetry celebrate a sublimer act of devotion than that of Albert G. Decker, a watchman at the Passaic river drawbridge, on the New York and Newark railroad. A train was due, and he was closing the draw, when his little child fell into the deep water. The child could only have been saved at the cost of other lives. The brave man did his duty, but his boy was drowned. There, too, is the instance of the engineer who recently stood to his post upon the burning locomotive, saving the lives of the passengers at the expense of his own. Instances of heroic and patriotic deaths under the most trying circumstances; examples of filial devotion, of charity, of benevolence, of love for fellow-men, are treasured in the heart of the true teacher, and are ever ready to serve as the basis of admonition and instruction.

"Biographies of great, but especially of good men," says Smiles, "are most instructive and useful as helps, guides, and incentives to others. Some of the best are almost equivalent to gospels, teaching high living, high thinking, and energetic action, for the individual and the general good."

Periodical literature for children might be made one of the most valuable instruments of moral education: it is surprising that educators do not rely more upon its aid. As it is, a great deal of mischief is done by agencies from which it should be least expected, counteracting good influences. Sectarian censor-spirit has gone so far as to lay its interdict upon publications not up to its standard of speculative orthodoxy, criminally careless of the fact that such discrimination necessarily diverts youth to the vile, trashy, sensational literature which marks our time. Firmness and perseverance on the part of

teachers and parents, coupled with strict supervision, is the only remedy in such cases. All the talk upon this subject but gives a zest to prurient curiosity, and advertises "Bob Renegade, the Outlaw, published by John Hitemhard, Murder Alley;" or, "How I Ran Away from Home, by Jim Daringdash, author of many soul-thrilling, blood-curdling stories."

Even more important than the consideration of current juvenile literature is a revision of the subject-matter in our school-readers. Why should they bring a list of lessons about the "Insolent Boy," the "Truant," "Unkindness," etc.? Such reading savors too much of the Upas-tree. Let them chronicle the good, speak of the value of honest toil, the satisfaction attendant upon the faithful discharge of duties. Let them impress the young reader with the beauty of veracity under all circumstances. Poetry has long been made the vehicle of the happiest moral delineations and the most effective appeals to our nature. Prose can also be found in abundance well adapted to serve the purpose in question. The efficacy of frightful examples is, at best, very doubtful.

It is said that the Spartans taught their children sobriety by exposing to their sight drunken slaves. Would you instruct the rising generation in dramshops, and in dens of iniquity? Would you have it study in the police-court, and graduate with forgers and swindlers? Why then parade illustrations of wickedness, when it is known that the contagious influence of bad example is more powerful than any antidote? For one who is kept thus from wrong-doing, five succumb to the innate, irresistible propensity to imitate. Some natures retain their spotless purity under the most adverse circumstances; but the prudent gardener keeps undecayed fruit apart from that touched by the rot.

I have purposely refrained, in the foregoing, from touching upon the subject of religious instruction, and avoided the question of the Bible in the school. The spirit of religion undoubtedly ought to imbue our moral education, but the teacher should steer clear of the merely sectarian dogma. No one, no matter to what sect he belongs, or how far removed from any sect, would desire his child to avoid the knowledge of those glorious truths, those sublime examples, those high doctrines recorded in the poetic language of the "Book of Books." As a recent writer in the *JOURNAL OF EDUCATION* well puts it: "On lesser questions, Protestants, Catholics, and Jews cannot in conscience agree; but on questions of heroism, of high moral purpose, of hope, of faith, the kindling eye bespeaks our kin." When the beautiful verse of Terentius, "I am man, and cannot be a stranger to anything

human," was for the first time publicly expressed in Rome, there ran a general murmur of applause through the amphitheatre. Would that such might be the case now! We have accustomed ourselves (deceived by the familiar picture which makes the educator see in the faint charcoal sketch upon the artist's easel the splendor of the finished portrait) to look at the outward appearance, the (sometimes counterfeit) manifestation of knowledge, will, and power. Fully, nay more justly, might we think of the moving thoughts, the feelings, the heart. Oh! could we view our pupils, acting like Stephen of Colonna, who, when he fell into the hands of his base assailants, and they asked him in derision, "Where now is your fortress?" simply replied, placing his hand upon his heart, "Here!"





## THE MORAL INFLUENCE OF MANUAL TRAINING.

BY DR. J. R. BUCHANAN.

It is over forty years since, by demonstrating the functions of the brain as the organ of the soul and commander of the body, the seat of all conscious life, that I organized what did not before exist anywhere, a complete science of Anthropology, out of what necessarily arises a philosophy of hygiene of medicine and of education, and which, after being taught many years in medical colleges, is the basis of the new American University at Boston, in which I am engaged. Had I time to give an exposition of the constitution of man, I might show from the brain and the soul the inseparable connection of the industrial and moral elements, using the word *moral* in its largest and most religious sense. But time permits only that I should treat the subject from an external and practical view.

Education has a very simple and almost self-evident science or philosophy,—more or less known to all, but very imperfectly applied. Healthful and pleasant exercise develops every faculty, every element of soul and body; and when all human powers are thus normally developed, education is complete. But that development must be symmetrical. He who attempts to row a boat with the right or left oar will not only make slow progress, but reach a different landing from the one aimed at. He who would live upon a single article of diet will soon find his constitution undermined, and perhaps beyond recovery. He who, in education, would cultivate but a single group of faculties, will produce so partial and abnormal a development as will mar for life the completeness of manhood and womanhood.

Are there any one-sided methods of education which impair the physical stamina to an extent that shortens life in many cases, and impairs its efficiency in all? Are there any methods of education which take men out of the currents of active life, disqualify them for business, and fit them only for solitary occupation with the pen? Are there any methods of education which stimulate selfish ambition or rivalry, but leave the high moral nature as feeble or as barren as it may have become by accident or evil association? The voice of many thousands affirms that such evils do exist, and we see their obvious cause in the theory of all prior centuries (which is still the dominant theory of the universities), that mere intellectual culture is a liberal education.



In the light of a true Anthropology, we see that intellect is the feeblest element of the human constitution. It is not the upbuilding or the controlling element. Instead of generating force, it expends it; and it would rapidly exhaust and destroy life if its operation were not checked by sleep. We cannot sustain its action more than two-thirds of the twenty-four hours. Hence a rigidly intellectual education not only interferes with the entire moral and physical development which it partially suspends, thus choking the very fountain of life, but actually expends vitality so rapidly as to make it even dangerous to delicate constitutions. What appalling statistics might be gathered on this subject by a proper medical commission we may infer from the injury of the eyes in German education, which begins in the primary school and attains progressively its full development in the universities, in which, according to Virchow and others, the great majority of the students become myopic.

All partial culture is fatiguing and ruinous. The law of health demands an equal distribution of the blood, the vital forces and activities. Nature supplies this to every human being who is not deprived of his birthright by an unnatural education, or the prolonged task-work of the manufactory. The boy naturally rebels against this constraint and learns to dislike his tasks, which he could not endure but for the refreshing relief of the playground, in which his animal and social natures are restored. But true education, or development is delightful. It is that which every child, however young, longs for and seeks. He seeks it in society, in observation, and in trying to do whatever others are doing; and if we give true education, it will be difficult to keep him away from the place where it is given. But no partial, one-sided system is a true education. It must give free play to all the activities of life in a healthful and pleasant manner. In doing this, every faculty agreeably engaged adds to the sum-total of energy and invigorates the rest. This is the natural method which is always successful, while the unnatural method of exercising a single group of faculties alone deprives them of the energy and support they receive from the rest. Each faculty makes its demand on the heart and lungs, and when all are engaged, the strength of the circulation and respiration exalts the vital power of each to a condition of increased energy, increased growth, and the development which is the object of all education.

The attempt to develop by partial education must always be a failure, for partial education is but a partial development of the vital forces of soul and body, and tends to their impoverishment. But when all are in operation, firmness, enthusiasm, zeal, and ambition are

roused, every faculty participating in their higher life works in the conditions of ease, success, and growth. Our lives are naturally lives of activity, and the child is born with a passion for activity of body and soul,—activity of the muscles and activity of the social emotions, with equal activity of the intellect. In the old-fashioned school his muscular activity is suppressed, and his emotional nature is also suppressed by the command of silence and the stern authority which suppresses the loving emotions that are indulged at home. Every hour spent in that situation is an injury to his physical and moral constitution. A child should live in the atmosphere of love, and his moral nature dwindles whenever he is taken out of it; and he should live in the freedom of bodily motion which his constitution craves. It is not mere restless motion that he desires, but the doing of something which gratifies his intellect, his curiosity, and his ambition of achievement. I do not, therefore, see how we can leave out skillful, industrial occupation from the education of any youth (whatever his future is to be) without doing him an injury by depriving him of normal development; and I hold there is no true liberal education which omits the invigorating industrial element.

So false have been the educational theories of the past that when we suggest industrial occupation, the feeling at once arises that it must be an interference with intellectual culture, and that the school and college can hardly afford any space for the new element, as they are already crowded by intellectual studies. But instead of presenting industry as the rival or competitor of literary intellect, I present it as the natural assistant and invigorator of intellectual education, maintaining that it is impossible to give as thorough and efficient intellectual culture without, as with it. Industrial occupation whets the appetite for knowledge. We can hardly appreciate (says E. L. Bruce) the passion for learning which sometimes fills the heart of a poor child.

The intellectual culture of active art is *far more vigorous than that of literature*, and makes a *far better preparation* for business of any character. In literary culture we feebly and indefinitely grasp ideas by their association with printed words. There is no life, no force in the object of our study. It taxes, but does not refresh the intellect. A sufficient amount of reading exhausts the character and reduces the man to a bookworm. In industrial art we are continually stimulated by the presence of the object, and the operations we are performing, and our perceptions are clear, positive, and exact. It is such perceptions that invigorate the mind and give it self-reliance, while the hazy conceptions derived from books give it habits that are hazy.

indefinite, and indecisive. Moreover, in literary study, the mind is in a passive or negative condition ; but in art, it is active and positive, The concentrated attention, the close observation, the ingenuity, invention, and judgment in use in art are far superior as mental discipline to anything that literature can give, and whatever is learned in this way is learned positively and permanently, while four-fifths of the literary acquisitions of schools fade out into dimness, or are lost.

The boy who has just constructed a wagon is in a much better mental condition than the one who has just learned his lesson in grammar. Art work is natural, pleasant and invigorating, while literary study in the young is generally task-work, which is not invigorating, but fatiguing. All labors which are not spontaneous or attractive, but fatiguing, have a degenerative influence ; and life is shortened by all extreme, fatiguing demands for physical or mental labor. That alone is beneficial which can be performed with interest and pleasure, and Professor Hagar tells us that even girls take to the use of carpenter's tools with enthusiasm. Moreover, industry is the basis of the moral nature. The first duty of life is self-support,—that failing, life is a failure. Hence, every hour of industrial occupation is a cultivation of the manly, moral nature which assumes at once and performs faithfully the chief duty of life. As we cultivate the muscles, not by reading essays on gymnastics, but by gymnastic performance, so likewise the moral nature is cultivated effectively, not by moral essays, but by moral action, and moral action implies industrial action. Industrial occupation has proved the most powerful, the absolutely indispensable, means of reforming criminals. If it has so great a moralizing power, we have no right to exclude it from the standard system of education, for moral development is worth more than intellectual development ; and if the choice were offered whether education should be all literary or all industrial, I should say industrial,—for that would give us both intellectual and moral vigor, which the present system does not. I claim that the industrial system is the *true liberal education*, and I accept the definition of liberal education given by Rev. H. Stebbins at the Exeter Academy Centennial, —“the discipline of the man, putting him in the widest relations with humanity as a general preparation for life in whatever sphere he may be called to act.” That is precisely what industrial education does, while the old-fashioned education produces a half-developed man in sympathy with the literati of to-day and with the literature of the past ; and we are all victims of the partial education more than we are willing to confess.

Would it be too much to say that an exclusively literary education

does not contribute to the active progress of society, but rather tends to hold the present anchored to the past? We might quote in behalf of such an opinion the assertion of Lord Macaulay, that "the University of Oxford had the unquestioned preëminence, the glory of being farther behind the age than any other portion of the British people,—a preëminence which that learned body acquired early and never lost." We might also refer to the Empire of China, in which literary education is not only widely diffused, but is the basis of honor and of political power, as the best example of mental stagnation united with literary culture. In proof of these assertions as to the moral influence of industrial training, I would refer to the State Reformatory School of Ohio at Lancaster, in which, for twenty-five years, the combination of industrial and intellectual education has been carried on under Christian influences, and has educated more than two thousand criminal youths, more than nine-tenths of whom have been fully redeemed for lives of usefulness, while their intellectual and literary progress has not been retarded by giving half their time, not merely to industrial training, but to actual farm-work and shop-work. The school of these working-boys compares favorably in intellectual progress with the common schools of Ohio, while their moral deportment is superior to that prevailing in any common school of our country of which I have any knowledge.

It is not strange that the hard-working boy at Lancaster equals the unworked boy of the common schools, when we know that industrial occupation gives a mental discipline of a high order, while the wild, disorderly sports of uncontrolled boys produce a mental dissipation and restlessness which counteract the effect of the school. If the hard-worked boy keeps up with the idle one, we may infer that the boy who is not heavily taxed in that way, but has his industrial training merely as a part of his education, will greatly surpass the boy who is merely a literary scholar, unassisted by industrial art,—by which I mean not merely drawing, modeling, or designing, but working also to produce something of value. This has been proved, in a New England school, one of the most interesting and unique experiments in education of which I have ever heard, and this is the lesson which is urgently needed. Industrial art education has been running too much in the old groove of intellectual culture, drawing and designing, instead of *doing*. It is a grand step in progress, but we need the next step, which continues *action with thought*, developing practical power and ethical principles as it was done in a New Hampshire school.

Ezekiel Rich, born in 1784, was a poor bound boy in New Hamp-

shire until twenty-one years of age, when he devoted himself to acquiring an education, became a successful minister at Troy, New Hampshire, and impelled by an ardent philanthropy and the memory of his own toils and sufferings, he established a school in a singularly original and practical manner to improve the common school system, and enable the poor to gain a good education by their own labor. I rely upon his own account of the school given forty-five years ago, in 1838, in a lecture before the American Institute of Instruction.

Mr. Rich's experience began in a simple and natural way from his objections to the demoralizing common schools, by teaching his own children at home and a few of the neighbor's. He began by allowing them to work during the recitation of spelling. That succeeding well, he introduced work into English and Latin recitations generally, and next introduced work into their studies, while he taught them orally. "Extending these experiments (says he), I was at length forced upon the broad conclusion that all branches of learning, except the manual part of a few, such as writing, drawing, painting, and instrumental music, can by competent teachers be communicated and received, to say the least, *as* pleasantly, *as* rapidly, and *as* thoroughly, at the same time with proper productive hand labor, as by any other method. Any work is proper that does not require too much noise, motion, or intense thinking,—such as braiding, knitting, sewing, etc. Even the impossibility of obtaining such kinds of self-supporting business need not break up or greatly embarrass institutions of this sort, provided other productive business, especially that of agriculture, can be procured. For, at worst, our system will, as we have proved by experiment in the late hard times, admit on an average through the year of the pupil's learning, and that to the best advantage, eight or nine hours a day."

Mr. Rich had in his school, altogether, about twenty-four permanent inmates under his family government; about forty manual labor boarding scholars, paying all their expenses, including clothing, by their labor, and sometimes making a little over; and about fifty day scholars, coming in from the neighborhood,—his object being, as he said, to give a good and useful education and entire support to youth between five and sixteen years of age, without any expense to them but their own beneficial and necessary labor, to fit them for useful lives, and to increase the useful efficiency of women without impairing their delicacy and refinement. I quote from his lecture the statement of his methods and results, the essential features being *the combination of oral instruction and manual labor during eight or nine hours daily* :

"1. The institution has well supported itself, paid six per cent. yearly on all the property used, and laid up, besides, rising of two hundred dollars a year.

"2. The health of our inmates, notwithstanding the hereditary and chronic diseases with which many of them came to me, is far above that of children in general, even in our very healthy region. It is the united testimony of all impartial observers, that our inmates, except when afflicted with innate and cutaneous maladies, appear peculiarly contented and happy.

"3. The part of the almost universal reformation of extremely vicious, uncivil, and perverse children of both sexes, within a few weeks or months after admission, is very encouraging.

"4. Our inmates are constantly forming good habits in the grand matters of care, neatness, frugality, order, and various important business, without which the greatest attainments in mere literature, science, and polite learning are of little value.

"5. As far as we can judge from the present state of experiment, this system adds greatly to the physical efficiency of males, and quite doubles that of the more wealthy and educated half of the New England females. [He mentions a female pupil of fifteen who walks thirty-five miles a day freely without injury.]

"6. Our pupils have, to say the least, made as great improvement in literature, the arts and sciences, as those of similar age who have been kept the same time, at great expense, in the best common schools, high schools, boarding schools, or academies.

"Oral instruction, instead of receiving detriment from its union most of the time with proper self-supporting handicraft, does, in fact, itself derive much advantage from it. Some people, prejudging the case, seem to think that our plan imposes a double task on children, and, of course, *double fatigue*. But the result of thorough trial proves exactly the reverse. I never knew any of our inmates to exhibit signs of distressing uneasiness by attention to both, at once, during eight, or even ten, hours a day."

He speaks of the painful weariness of children in common schools after five or six hours of study, and the discontent and fatigue of children kept seven or eight hours a day at work, and the great contrast in "a school of our sort, where proper and productive business is prosecuted, together with pleasing, exciting, and profitable conversation, or oral instruction, conducted by an agreeable and able associate or teacher," where, "during some eight, ten, or even twelve, hours a day, fretful irksomeness has no place. Observe the cheerfulness, the vivacity, nay, even the innocent, healthful mirth often here enjoyed. Nothing is difficult, tiresome, or disgusting. The labor of the hands, which soon becomes almost automatic, operates as a spring and balance-wheel to give constantly fresh vigor, self-posses-

sion, and stability to the mind ; and delight of the mind arouses the animal powers, gives energy to the body, and pleasant sensations, causing the time to pass lightly and agreeably."

"Another advantage of uniting oral instruction with proper work is not only the diminution or prevention of fatigue from both, *but the great increase* of the rapidity of acquiring learning. Pupils will obtain knowledge and general mental improvement *much faster* with the union, most of the time, of hand and mental labor than withoht such union. This is proved by abundant trial in our infant institution, as fully attested by pupils of sufficient age and experience, by their parents and friends, and by many visitors and examiners. Add proper labor to oral instruction, and the rapidity of acquisition is surprisingly increased, and the fatigue diminished. When work is brisk, learning is brisk ; and so of the opposite. The vast gain of time for learning by this union is no small affair. As I regard the health and general good of my dear inmate pupils, I would not allow them a single day to dispense with their hand-labor, even if it were of no pecuniary profit.

"Education, according to this system, is of vastly superior worth after it is acquired. It appears from reason, and as far as we have yet had opportunity to judge from experiment, also from fact, that this system, faithfully followed from an *age as early as five years*, will add quite four years in both sexes to the early, stirring, and best part of self-directing, independent life, qualifying our youth for settling in life, and managing their own affairs four years earlier than usual. It will probably add as much as four years to the later part as well as first part of man's life. It annihilates much want and suffering, gives much superior health and comfort, and adds quite one-third to general human efficiency ; fitting people in a special and peculiar manner for the various ordinary relations, duties, trials, and enjoyments of real common life, and, finally, for the society and felicities of the heavenly state.

"Another thing which peculiarly enhances the value of this education is its qualifying its subjects in an eminent degree to teach others what they themselves know. This we design all our pupils, who commence in season, to acquire by the age of sixteen, for they are daily learning what to teach and how to teach it.

"This system takes any child of good promise, especially the most needy and unfortunate, including those of either sex, who by bodily infirmity are unfit for business save what is sedentary and light, at about five years of age and carries them forward till sixteen or more wholly by the cultivation of their own powers in a course of general education for common or professional life. It is designed by that age to finish the school and business education of females, or to furnish them well for self-teaching, self-care, and self-support in any proper station or employment, embracing common house-keeping, cookery and dairying, millinery, dressmaking and tailoring ; an ornamental education in the fine and polite arts, such as drawiug, painting,

and music, and a solid literary and scientific education besides, quite equal to two-thirds of that on an average obtained by graduates from our colleges."

I have long believed in the entire practicability of educating the whole rising generation with very little expense beyond what is defrayed by labor of pupils up to the age of eighteen or twenty years; but Mr. Rich claims to have succeeded with the labor of pupils between the ages of five and sixteen, which certainly required great executive capacity and skill on his part, and the whole scheme, in its conception and execution, was so great an advance beyond his contemporaries as so entitle the name of Rev. Ezekiel Rich to rank with those of Pestalozzi and Fallenburg. Amid the cramped circumstances of a poor country parson, he achieved a success not surpassed in any educational record, and I would like to see a monument erected to his memory.

I have long been accustomed, from many years' experience, to estimate good oral instruction as being three times as efficient as text-book study, and I have regarded good training in manual arts as more than equal to literary instruction for intellectual progress, while it is the very backbone of moral education. Mr. Rich was the first to demonstrate the power of the two in combination to aid each other, producing more rapid intellectual progress, and destroying the fatiguing monotony which attends any single operation. I regret that he did not give us a detailed description of his methods. Children cannot sustain eight hours of mere study, or eight hours of mere work, without great fatigue; but eight hours of industrial occupation, enlivened by conversational instruction and brief intervals of recreation, will maintain unflagging interest and pleasure; and when frequent singing is added, the pleasure amounts to enthusiasm, for whenever men sing at their work they work with pleasure.

Mr. Rich is not the only original thinker in our country who has tested and proved the superiority of an integral education, which combines industry with literature. Dr. O. H. Wellington, a clergyman and physician of much originality of thought and earnest philanthropy, established the Jamestown Institute at Jamestown, New York, in 1859, in which industry and inventive originality were the chief characteristics, the pupils being made original thinkers instead of passive recipients. His methods were highly appreciated by Pierpont and Horace Mann, and all who were well acquainted with the school, and his experience induced him to say, "Almost all think that, to develop rapidly, six hours at least must be given to study; while the fact is, that more can be learned in three hours if *manual operations*



are made attractive and all amusements be made a means of culture the rest of the day." "As certainly as the stomach suffers if more food is taken than can be assimilated, so the mind suffers if the memory is overfed with words embodying principles that cannot be understood or applied. True, memory must be cultivated as well as other faculties, but this is most effectually done when the pupil not only comprehends principles, but is interested in applying them to the ordinary work of common life."

In this integral education, so happily illustrated by Rich and Wellington, the acquisition of any useful art should be accompanied by oral instruction concerning that art; and whatever is acquired in connection with practical work is acquired naturally and successfully, because all these faculties of soul and body are symmetrically and pleasantly engaged, and the entire brain is roused, every faculty working with full power, as every soldier in an army is impelled by its aggregate zeal and courage.

As the man who attempts to run upon one leg has poor speed and quick exhaustion, so do all the single-stringed methods of education produce exhaustion, fatigue, and failure. But when the soul is uplifted and inspired by the love of the living teacher and the ravishing power of song, and when these exalted sentiments are consolidated in our bone and muscle by industrial action at the time, we develop a noble and enduring manhood for time and eternity. It is the only manhood on which a republican government can stand, and this morally industrial education is the only possible measure which can relieve us from the dangerous classes of criminals, from the threatening army of tramps, and from the convulsions, mobs, and anarchy which are coming upon us, when millions of unskilled and poorly educated workmen living near the precipice of famine are liable to be tumbled over its edge by any sudden tilting of the balance of trade, or the fluctuations of markets, even if the curse of monopoly and speculation were removed.

A population without any industrial training is a Pandemonium; and a population with no better industrial training than what has been developed by accident is like a volcanic region covered by a thin crust which the fluctuations of commerce are continually cracking. With the terrible Pittsburg riot still sounding in our ears, we should be prepared to present and enforce the educational remedy with such vigor that every Legislature would respond to our demand for schools of industry and virtue for all,—and for this good work I trust the Bureau of Education will diffuse the necessary enlightenment.

## PLACE AND FUNCTION OF THE MODEL SCHOOL.

BY CHARLES DE GARMO.

In the discussion of this topic, an important question arises at the outset as to what is meant by a *model school*. In a restricted sense it means a department of a normal school, taught by experienced instructors, and designed to be a model for the imitation of prospective teachers. In a more general sense it may signify any department of a normal school whose purpose is to assist the student to embody in practice his academic and theoretical knowledge.

It is with the place and function of the model school, considered in this wider sense, that the present paper has to do. The very existence of a normal school assumes, or should assume, that teaching is a duality, a science and an art; a business that can be properly done only when knowledge has been embodied in successful practice. One-third of the public school teachers of Illinois enter the school-room for the first time each year. Probably eighty-five or ninety per cent of them have no professional knowledge whatever, while their academic attainments, being acquired in the district and village schools, are not high. Even if they should all do the academic and theoretical work of the normal school, there would still be a wide gap between their attainments and their teaching. They, and consequently the schools they teach, would suffer from this lack of proper ideals of what a school should be; for labor with what zeal we may, it is impossible to suit either the matter or the manner of adult teaching to that which is best for elementary teaching. Never having had practice in actual instruction, these persons would be deficient in the power of teaching others so that the best result, both of mind-growth and acquisition, should result. Knowing only the few methods that they themselves have come in contact with, they are likely to become mere groove-runners, and finally, having but little idea of what is fairly attainable in public schools, they fix upon these schools irrational, time-wasting courses of study. It was with the design to save the public schools from the evils just mentioned that model, or training departments were established in connection with normal schools. For purposes of more careful examination, we may consider the function of these schools under four heads:

1. There may be what is exactly defined by the term *model school*, a school in all respects a model for imitation, taught by skilled teach-

ers, and fully equipped with all proper appliances. Such a school must hold an important place in any fairly complete normal school, for, since there are probably not more organizations among teachers than among mechanics, the most that may fairly be expected of the mass is that they be able successfully to imitate or adapt the methods which their leaders devise. Another advantage is that it is adapted to large numbers, for a few may do what many can see.

2. I mention next the *training school*, or the school in which the future teachers may practice under the supervision of a training teacher, so as to get a practical mastery of most of the difficulties of instruction and management. This department is indispensable to the successful preparation of teachers. Nothing can take its place, for, though we may form ideals by sight and instruction, we must learn to do by doing.

3. It is within the function of these schools to originate and test new ideas and methods, for surely normal schools cannot afford to rest under the imputation of their enemies that they are but mills, grinding out an unvarying, mechanical product, always to be known by empiricism and dogmatism. I therefore place as the third function what may be termed the *experiment school*, or the school in which new ideas and methods, originating at home or abroad, shall be put to practical test by experienced teachers.

4. It is of the utmost importance that candidates for teaching should be taught to know what is desirable and attainable in the various departments of common school work, and I apprehend that it is within the function of the class of schools of which we are speaking, to have a department which shall determine the allowable minimum of efficiency; *i. e.*, that shall show what should be accomplished by every teacher. We may, for want of a better name, call this the *determining school*.

It would be an ideal state of things if we could have all four of these departments fully organized in connection with every normal school. The first would present models for imitation, the second the indispensable opportunity for the candidate to do actual teaching, the third would secure a fair trial under favorable circumstances of all new methods, while the fourth would determine for our schools what those of the West, at least, stand sadly in need of, *viz.*, what and how much ought to be done in them.

It will be seen that these lines of work are more or less independent of each other, but it is not probable that any school can be found in which all are pursued separately. The model and training school at Normal, Illinois, with which I have had the honor to be connected

for some years, represents the growth of a quarter of a century. In it are exemplified in different degree all four of the departments I have mentioned, though all experimental and determining work is incidental to the model and training departments.

Before discussing in detail the work of model schools, we may properly note a few considerations as to the time at which it should be done. The place in the curriculum for the work of these auxiliary schools should, in general, be such as will, on the whole, best enable them to perform their functions. One consideration demands that it come late in the course, and another that it come early. Unless it comes late, much of the efficiency of the school must be lost, since most of the students are at first unprepared to receive the highest good that the model school can impart. Unless some of it, at least, comes early, it will fail entirely to reach a large percentage of the normal school, since perhaps not more than ten or twelve per cent. of the students of these institutions, in the West at least, ever complete the course, while large numbers leave at, or before, the end of the first year.

In some foreign countries, from two to five per cent. only of undergraduates are employed as teachers, so that the normal schools, being able to hold their students until graduation, can arrange their professional work according to an ideal plan; but in the United States, where anyone may teach who can pass an examination in the academic branches to be taught, the work of the model school should be so placed in the curriculum that it will reach, to some extent, the large number of students who leave early in the course.

In our school at Normal, the model work, in the restricted sense,—or as we call it, *observation*,—comes first in the professional course. This arrangement is made because, though untrained persons are defective in observation, they can see far better than they can teach, and with less danger of unfortunate results to themselves and the school. Its systematic presentation is confined to the primary grades. We present the work of the primary school to the observation-class, rather than that of the intermediate or grammar grades, chiefly for two reasons:

1. Because primary teaching is likely to be the least understood.
2. Because the need of skill in this grade is more widespread than that in any other department.

Most prospective teachers being able to recall little, or nothing, of their own early tuition, having seen but little primary teaching in their subsequent education, and knowing nothing of the nature of the child's mind, or the philosophy of teaching, can do little but grope in

the dark at this most important time, when the child is helpless and the teacher the sole guide

The need is more widespread, because the principles which apply to primary teaching obtain in greater or less degree well along into the grammar grade, so that there are few, if any, who do not need to know them; while to those young men who leave us to become principals and superintendents of schools, the instruction in matter and manner of primary teaching is invaluable.

Our observation class, often numbering 150, is composed each term of all who have just entered the normal school for the first time. Thus observation is one of the initial studies of the course. Now, unless something is done to help these untrained students to see the things important to be seen, and to preserve for future use that which is valuable, much of the time and effort put into this work would be lost. Each student is therefore required to note in his scratchbook the results of his observations. At stated periods each week the class is called together by the training teacher having charge, who then proceeds to question them upon what they have noted, to correct false notions, and to elaborate the plan and purpose of what they have seen. The students then record in permanent books the amended history of their observation, and, so far as they are able to do so, its philosophy. The work of a *determining* department is brought in here, being embodied in schemes of what and how much should be attempted in the different grades of the primary school. These schemes are written upon the board by the primary teacher, and permanently recorded by the observer. At different stages of the work,—as, for instance, upon the completion of the observation in reading,—the class are examined in writing upon what they have been over. These papers are corrected, graded, and returned. It may be remarked here that the diaries and recitations of the class are also graded. A considerable, though diminishing, per cent. of the students fail to obtain the required mark the first term, on account of the unusual difficulty of the subject, and review their observations at a subsequent term.

It may be well to state at this point that our training force consists of three persons,—a principal, and two assistants. Besides assisting materially in the training work proper, one of the assistants presides over the primary grade as principal, and the other over the intermediate and grammar grades.

The next work of our model school, using the term in the general sense, is that of the training department, where the pupils of the normal school do actual teaching. The desire to reach all of our stu-

dents prompts us to put the work early in the course ; but in addition to the reason already given for deferring it until late in the course, is the following very important one, which concerns the existence and efficiency of the model school itself. The pupils of the intermediate and grammar grades, of which I have had charge, pay a tuition of \$15 and \$25 a year, respectively. They are mostly drawn from the public schools of Normal and of Bloomington, which is two miles away. In order to secure patronage, there is demanded of us an efficiency in the pupil-teachers which forces a minimum of ignorant and a maximum of well-prepared pupil-teachers. It may be thought that the interests of the pupils in the model school are purely secondary, and not to be considered when determining when the pupil-teachers shall do their work ; but we have found it necessary to consult the interests of model school pupils at every step. Therefore, pupil-teaching does not begin until the second year of the course ; not until instruction has been given in the theory and art of education,—though a few who are more than ordinarily well prepared are occasionally allowed to begin earlier.

That the training work is a function of the model school which can not be ignored is, I apprehend, generally conceded by normal school men ; but what it shall consist of, how it shall be done, is, so far as I can learn, not unanimously agreed upon. We at Normal have sought to arrange our plan so that the best good of both pupil-teachers and model school students shall result. To secure this end there are a number of important things to consider :

1. The prospective teacher should learn, so far as may be, what difficulties in school management he may expect, and how he may overcome them.
2. He should learn to be skillful in imparting knowledge.
3. He should be taught to be rigid, yet cheerful, in holding pupils to do the work assigned.
4. He should learn to arouse even sluggish minds to self-activity.
5. He should learn to wield a personal influence over pupils, that he may arouse their interest and ambition.
6. He should learn to acquire a comprehensive grasp of the teaching of any given subject.
7. He should be able to ask and answer the question, not merely how shall I teach this, but why should I teach it at all.

In short, he should be placed in such relations to the training school that he may be able to put into practice, successfully and immediately, that which he has learned as theory or fact. To accomplish the ends I have enumerated, it seems to me that the pupil-teacher must do real

teaching, and not play teaching; that most of his effort should be continuous, and not spasmodic; that, so far as it goes, his teaching should resemble as nearly as possible what he must do when he takes charge of a school.

The pupil who makes a few paroxysmal efforts to teach in the presence of a crowd, and then stops, can surely not comprehend the difficulties of school management, or how to meet them, for the relations existing between him and his pupils are purely artificial. He cannot gain any enduring hold upon the minds of his pupils, for how can his spirit mould theirs when the two have scarcely met ere they part? Then, again, how can a teacher get any comprehensive grasp of the teaching of any given subject, if his teaching, like the bounding western cyclone, touches only here and there? And what is a teacher's experience good for, except as it enables him to stand above his work, so that he may take comprehensive views of it, properly subordinating every part? The pupils under such tuition become like the coquette, who changes lovers with every change in the moon,—fitful and capricious. Feeling little continued personality in their teachers, they become dull to the most useful and inspiring influences that a teacher can exert. Governed by these and similar considerations, those who arranged our present training work at Normal did so according to the plan I shall now describe.

The model school being drawn from all classes of schools, presents a wide variety of material upon which to work. When organized properly, it furnishes classes of good size and fair grading for from fifty to seventy recitations daily. These classes are put into the hands of the pupil-teachers for one term of twelve weeks, each teacher taking one class in one subject for one hour a day during the whole term. The classes are assembled in their respective grades at the beginning of recitation periods, being sent out one by one at the call of the pupil-teacher, who conducts his class to a regularly assigned recitation-room, where he proceeds with the business in hand as though he were in his own school.

Sometimes, if there are more teachers than classes, two teachers are placed with one class, one to teach and the other to observe the work and write his criticisms in his diary. The pupil-teacher in charge is visited every day or two during the term, or as often as is deemed best by the training-teacher, or by one of his assistants, who notes the faults or merits of his work, and who often takes charge of the class for a time, in order to give a model lesson. When the class has been returned to the assembly-room, the pupil-teacher returns to his regular duties in the normal school, taking the earliest opportu-

nity, however, to visit the training-teacher, in order to receive his comments, criticism, and directions. Each pupil-teacher is required to keep a carefully written diary of all his plans and of the details of his class-work. In this book he notes all his experiments and their results, giving, so far as he is able, the reasons for their success or failure. The diary is handed to the training-teacher once a week, by whom it is carefully examined, corrected, and returned. Before the time for handing it in again, the pupil-teacher goes to the training-teacher, in order to show that he understands the meaning of all marks of criticism. On Monday afternoon, at the close of school, a teacher's meeting is conducted by the principal of the training department for one hour. At these meetings are discussed topics pertinent to the affairs of the model school, and to correct teaching in general. Four terms of such work as has been described, for each graduate of the school, is the extent of the training-work that is done in our institution.

If you are interested in this matter enough to read Professor James's article in a late number of the *Illinois School Journal*, on the normal school at Halberstadt, Prussia, you will note how the work there compares with what I have just described. Their model work, strictly so called, appears to consist of a model lesson given by the training-teacher once a week throughout the course, and to observation in the model school for one to two hours a week during the third year of the course. Their model work, therefore, including both model lessons and observation, amounts to about 180 hours for the whole course; ours to five hours a week for twelve weeks, or sixty hours for the course, or about one-third of theirs. Their training work comprises about five trial lessons by each pupil during the second year, and the same number during the third year of the course, and pupil-teaching for three terms of thirteen weeks each. So that in amount their training is practically the same as ours, with what I regard, on the whole, as a somewhat better arrangement. They have the same number of teachers' meetings that we have, but I see no provision for diary work, though that would hardly appear in their printed course.

On the whole, Halberstadt is ahead of us in model-school work, as might be inferred from the fact that their plan is arranged in conformity to an ideal, while ours, and I suppose every other in the United States, is arranged in view of the limitations which hedge in all normal-school work in this country.

I see no specific provision in their plan for experimental teaching, or for the work of a determining-school, nor is there in any normal



school with whose work I am acquainted. All that is done in these lines appears to be purely incidental, and thus likely to be slighted. It is to be regretted that this is so, for normal schools should be the leaders in all that is new and valuable, rather than followers; and they should not leave to chance or tradition so important a work as the determination of the curriculum.

Recapitulating the conclusions of this paper, I find the function of model schools to be four-fold, the work consisting primarily of model teaching for imitation, and of actual pupil-teaching in the training department; incidentally of experimentation on new ideas and methods, and the determination of the kind and quantity of work to be done in the common school. I find that model teaching for imitation should come early in the course, and may profitably be confined to the primary grade; that the observers should be held for a reproduction of their observation, that they may be impressed with its plan and purpose; that pupil-teaching should come in the latter half of the course, and should be continuous, rather than broken, and, in the main, conducted in the presence of only pupils and training-teacher, rather than in the presence of a cloud of witnesses; that experimental and determining-work, though important, are now merely incidental, and, consequently, likely to be neglected.

Of the importance of the theme on which I have written, I can hardly say enough. Through their model and training schools must the normal schools of America look for the exposition of their best results, and through them, more than any other agency, I am convinced, must they look for the approval and support of the people. That is professional work which fits for teaching, and that is the best professional work which best fits for teaching; but to be properly appreciated and supported, our normal schools must not only *be* professional schools, but they must also *seem* to be professional schools. That the end and aim of model schools is professional, can be seen by everybody. That the end and aim of academic work in normal schools is professional, is not seen by everybody; so that to ignore, or to esteem lightly, the work of the model school is bad policy, to say nothing of the dwarfing effect upon the work of the normal school. It behooves, therefore, those interested in the highest success of normal schools to bring to bear every agency that tends to make their model schools better. Personally, I shall watch with deep interest the development of normal schools in America, for I am now on my way to Germany, there to spend some years in the study of Pedagogy that I may more efficiently help to lift them to the plane of their true scope and function.



*THE TEACHING OF DRAWING IN GRAMMAR SCHOOLS.*

BY WALTER S. PERRY.

It is admitted that the public schools cannot give what is called a technical education,—that is, an education which shall prepare for particular trades or industrial occupations; at the same time the growing importance of these occupations makes it necessary that in our public education we consider their demands in our provisions for the development of manual power, skill, and taste. What our public schools can give in the way of industrial training, which shall at the same time be of fundamental value in general education, is one of the important educational topics of the time.

A strong conviction is arising in many minds that more attention should be paid to manual training in education than hitherto, and we have heard much on this subject in educational conventions. Now it must be admitted that before there can be any broad development of manual training in the schools, or technical or industrial training of any kind, there must be broad, general instruction in industrial drawing. This fact is so generally recognized, that in Prof. Thompson's valuable essay on "Apprenticeship Schools in France" we find these words: "Technical education without education in technical drawing is a delusion and a sham;" and in a report by a distinguished French commission on industrial education are found expressions equally strong in regard to the importance of drawing as a basis for industrial training.

The introduction of drawing, therefore, into public schools should be regarded as an important step toward general industrial education, and in view of this fact, what is taught as drawing in the schools becomes of the utmost importance both practically and educationally.

The subject is comparatively so new a one in education, and efforts to introduce it into schools have been so independent of one another, that there has been no opportunity till now for a general exchange of views and a comparison of results. Further than this, teachers of drawing have hitherto labored quite independently of one another, and have found it extremely difficult to get any proper recognition of the study in their respective schools. Let us hope, however, that this discussion inaugurates an era of conference dan-

coöperation in this matter. The field before us is a broad one, and to guide us we need all the light that experience can give. Industrial education is becoming a question of great importance, and drawing is seen to be one of the fundamental elements in this education; yet it is a significant fact that there are but few trained teachers directing the study in the schools, while some of the very largest cities have only one teacher of drawing for all their schools. We need to elevate the educational and practical importance of the subject before the public; to make clear the aims of our instruction; and as the first step to this end, we should endeavor to come to some general agreement in regard to what is to be taught as drawing, and also in regard to proper methods of teaching.

*How is Drawing Usually Taught?*—It has been remarked that it is quite universally recognized that drawing should be taught in the public schools, and in the best schools of the country it is taught, but *how* is it taught? I think I am safe in saying that in more than half of the schools that claim to teach drawing the subject is merely mentioned in the course of study, and not much else can be said in regard to it. Vague directions are sometimes added, but these are of little practical value to the teachers, who, left without any intelligent idea of the object or aim of the instruction, do little or nothing with it. In many places where special teachers are employed, and where regular work is attempted, there is not a fixed purpose or aim in the instruction, and the system or method is therefore changed as often as there is a change of teachers; in fact, schools might be mentioned which have been experimented upon with three or four different systems in as many years.

Under this condition of things, with no fixed principles established, school committees are at the mercy of agents of so-called systems of drawing who crowd upon them from all parts of the country; and the average committee is puzzled to decide between their conflicting claims. With rare exceptions, the member of the school board is entirely ignorant in regard to the study; his ideas of its practical and educational value are usually of the vaguest kind, and quite possibly he regards it as an ornamental study only. Such persons see nothing that looks pretty upon the printed page; a skillful agent dwells upon the training of the eye and hand, and the necessity of securing more beauty in our industrial objects; votes are secured, and the question of industrial training in the schools of communities may be given in an entirely false direction. Teachers and children accept the inevitable, and boldly plunge into work of which they understand neither the object nor nature.

And with all due respect to my co-laborers, I must say that the ideas which prevail among teachers of drawing, themselves, have tended not a little to add to the confusion of mind which prevails in regard to the nature and educational treatment of the subject. Some think drawing means one thing, and some another; and the member of the school board may well look puzzled, and ask what is meant by drawing,—what are the underlying fundamental principles,—when we, as teachers, say there must be taught Freehand Drawing, Model and Object Drawing, Dictation and Memory Drawing, Geometrical and Mechanical Drawing, Perspective, Historic Ornament and Design; a nomenclature that is enough to discourage any teacher or committee. All this tends to confuse, because it is not an educational arrangement. Is it not time for us to get out of this vague, indefinite, into some more coherent method of work? To make a beginning in this direction, it seems to me, is our duty and privilege.

*What is Drawing?*—Drawing is the language by which a true idea of the form, the appearance, and the decoration of an object is conveyed from one person to another. It is the main language of the skilled constructive industries, and its importance to the designer and artisan is only comparable with reading and writing. Consider for one moment that wonderful piece of mechanism that breathes the breath of steam; who has not seen it, as the piston moves swiftly backward and forward with the same steady motion? The various parts move in their allotted places. As the great wheel turns, electric life seems to fly along the belt; pulleys and shafts catch the spirit, and drive here and there the endless number and variety of machines, ever changing raw materials into goods necessary for our life and comfort. Again, look at our buildings, at our ships that sail the sea, laden with the commerce of the world,—all these and the thousand and one industrial objects about us, intricate in design, wonderful in construction, beautiful in ornamentation, were first conceived in the brain of man; but their construction has been made possible mainly by the use of this language—drawing, which enables the designer to express the minutest fact in their construction so as to be readily understood by the workman, and embodied forth by his skilled hand.

*General Divisions.*—Inasmuch, then, as drawing is the universal language of our vast manufacturing industries, it certainly would seem that the drawing which we teach in the grammar schools should be such as will include the elements of this all important means of expression.

But drawing has applications not alone in the *construction* of

objects; it is the principal means by which we express ideas in regard to the *appearance* and *decoration* of objects; so that the subject considered as a whole may be regarded as embracing three fundamental divisions:

*Construction*—Drawing as applied in industrial construction,—the making of objects.

*Representation*—Drawing as applied in representing the appearance of objects and of nature.

*Decoration*—Drawing as applied in ornamentation.

Sound instruction in drawing means teaching a knowledge of form and its application in these three divisions.

*Subject-matter to be Taught.*—We have seen that the subject has a threefold division into Construction, Representation, and Decoration. These three are but two kinds of drawing, so far as execution is concerned,—that done by the free hand, and that done with instruments,—under these three general divisions of the subject we may teach the various kinds of drawing known as freehand, dictation, memory, object, geometrical and mechanical drawing; but with a double value, inasmuch as the varied work, whether it be freehand or instrumental, may be so planned that it will tend toward one or more of the three general divisions of drawing.

Let us consider briefly the details of these three divisions, and first in educational and practical importance must we place the division of

*Construction.*—I think that drawing has failed to receive just recognition because of the failure to recognize the great importance of the constructive division of the subject. This forms preëminently the educational and practical side, and yet it is the one which has usually been ignored, while the pictorial and decorative sides have been given undue prominence. The fact that drawing is so often spoken of as an ornamental study by well-informed persons is proof that its educational and practical value has not been at all comprehended. A great many say, in support of the matter, that drawing is important; but why is it important? When these æsthetic advocates of drawing are brought to the point of defending the practical importance of the study, they cannot tell *why* it is important; they are at a loss for good and substantial reasons. They aim to give what they call training to the hand and the eye, but this, though very important, is very indefinite in its results, and does not touch one of the most practical reasons for making drawing an important branch of education. We must recognize that it is the practical usefulness of drawing in adult life that warrants its introduction into the

public schools, and we have only to examine how it is made use of in our constructive industries to see that the constructive division is not only the most practical division, but at the same time the most educational one.

When drawing was first introduced into the schools, one of the chief reasons given why it should be taught was, that children might learn how to make and to read working-drawings before passing from the school to the workshop; but nowhere could be found a system of books that brought the subject down to the grammar schools; and, as a teacher, I felt somewhat afraid I would be questioned upon the matter. Not a book had I to show which held between its two covers one single drawing that represented the simple projections of a common object so arranged as to give a pupil, or teacher, any idea how such drawings are made use of by the artisan.

And when I first suggested to a gentleman, who is now doing very much to develop this feature in the public schools at large, that in our middle schools this subject must be taught, I received this answer: "I see its great intrinsic value, and I hope soon to see it introduced into the lower schools; but at present it cannot be taught; teachers would cry out against it as a subject too difficult to teach, and the opponents of drawing would say we were endeavoring to teach orthographic projection, and would thus frighten timid people with the very word."

Allow me to add, that this subject of constructive drawing, or the making of working-drawings, has been taught for several years in the schools of Worcester. I have found it a feature that develops from primary object-teaching of form without a break; that is readily comprehended by teachers, and the one subject in which the pupils are the most interested.

*Why has Construction not been Taught?*—I believe it has not been taught in the grammar schools hitherto because it has been thought necessary to treat it scientifically, as laid down in the regular textbooks on orthographic projection, with the various planes of projection, etc. I have in my possession a small book, intended for grammar-school use, written by one who holds a prominent position as instructor in one of our leading institutions, yet I cannot believe the author ever taught a class of young pupils for five minutes. He begins with the projections of points, lines, planes, etc.; projections of things which cannot be presented in solid form, and the treatment of which does not appeal at all to the perceptive faculties of pupils. Now working-drawings are simply drawings that tell the facts about objects, consequently, to teach such drawing in the schools we have

only to teach pupils to observe the facts of objects, and then to express by drawings in the simplest way, by the free hand or otherwise, what they see ; and I hold it to be an educational absurdity to require pupils at this stage to learn about planes of projection, and all that is usually first presented under the head of orthographic projection, and a great wrong to the pupils to omit this feature till they are of an age to comprehend such a scientific treatment of the subject.

Geometry forms the basis of all drawing. This point is so well established that it needs no comment, but in answer to those who claim that pupils, when they begin the study of working-drawings, should learn just what is meant by that projection which is made by drawing lines, from every point to be projected perpendicularly to the plane of projection, and learn to work to scale, etc., it may be asked, Is it necessary that pupils should learn to demonstrate theorems in geometry before practising geometrical construction? Indeed no, and so I say that drawings expressing the facts of form, executed, they may be, roughly by the unaided hand, may be made to convey unmistakably the relative dimensions and positions of all portions of an object. And this kind of freehand work is as valuable as any other, as regards the training of the hand and eye, while it possesses an educational value not to be compared with that attained through the mere copying of abstract forms.

*How is Construction to be Taught?*—Inasmuch as in this paper I must give my own methods of instruction,—knowing full well that they offer many opportunities for improvement,—an outline of the work in this division is presented with the accompanying illustrations, in order to bring the nature of the work clearly before you, that it may be readily comprehended by those who will take part in the discussion.

A cylinder, a square prism, a double cone, and a piece of paper oblong in shape, and in size about equal to the upright view of the cylinder or block, are taken into the school-room. It is explained to the pupils that they are to learn to make just such drawings of the first three objects as a carpenter would require if the objects were to be constructed from drawings ; and after a much fuller explanation than can here be given, a drawing is made on the board to represent the side or upright view of the cylinder, and at the same time, the pupils are questioned in regard to the various lines necessary for its construction. An upright view of the square prism is then made in the same manner, and afterward one of the paper. The three drawings are yet all alike ; they are oblongs, though made from



different objects. If now the pupils are requested to observe the thickness of the objects, they see the necessity of other representations to fully describe and to distinguish them. If they are asked to state what should be drawn to represent the other view gained in looking directly at the end of the cylinder,—the other fact of the solid,—the true shape of the end is perceived, and the answer is "A circle." Now by continuing the vertical lines of the oblong upward, by dotted lines or lines of projection, and drawing the circle to touch these lines, all the facts of the form of the cylinder are expressed. This much being done, pupils will see at once what is necessary to express the facts of the square prism and piece of paper,—the adding of a square and a straight line. By proper questioning the pupils are led to see that something more is needed, that the length and breadth are to be shown in feet and inches, and the manner of indicating feet and inches by the signs in use may be explained.

Following this, in a similar way, working-drawings are made of other simple objects, from directions elicited from the pupils.

Children are exceedingly interested in this, their first lesson in making working-drawings. It is a revelation to them, a practical illustration of drawing being used as a language to communicate ideas; and besides the practice in drawing which the pupils have, is not such work most valuable in training the powers of perception and comparison, thus developing the thinking-power? And just here may be mentioned the great difference it makes in the interest, and I may say value, of the exercise if the pupils are required to make the drawings as though they were the working-drawings for a carpenter, to be used for practical purposes, rather than the simple representation of dry facts.

*Foreshortening in Construction.*—Owing to the foreshortening of lines and planes, there may be found some trouble at first in teaching the geometric views of some objects. Take the steps for illustration. Pupils see at once what the end view should be, because all lines to be represented are in the same plane, but with the front view it is different. If, however, we cover up all the steps of the model with our hands, except the first or lower step, and ask what should be drawn to represent that alone, there is no hesitation,—the answer is, "An oblong." By covering all but the second and leaving that exposed, the answer is the same in regard to that; and so with the rest. The pupils are led to see that the combined height of all these oblongs cannot be more than the height of the steps as seen in the end view,—that the steps can be no higher when seen from the front than from the end; and so, with fuller explanations than this paper

admits, they are led to see the proper height and position of all the oblongs, and the best way to draw them.

Similar explanations might be made of the manner of drawing the triangular prism, the top view of the square pyramid, the top view of a common bell, and the different geometric views of other objects.

*In What Year is this Work to Begin?*—At the present time in Worcester, where children spend nine years in the schools below the high school, and begin their school-life at the age of five, this particular kind of drawing, of representing intelligently two or more views or facts of a solid, is begun in the fifth year. It might perhaps be commenced earlier with profit; but in the years previous the work is of that nature in the representation of one view that this is only a continuation or further development; and considering all the other things to be attended to in the first two years that children use books, and as the subject matter extends over the period of five years before the pupils graduate from the grammar schools, it seems to me it is quite early enough.

But you may ask, "How is this subject to be continued? Is this matter of making working-drawings to be carried out by free hand through all these subsequent school years?" Pupils throughout the whole course in drawing have much practice in free-hand work. I think that in about the sixth year this particular division of the subject should be placed on a more thoroughly geometric mechanical basis. Geometry, as has been said, forms the basis of all drawing. The children in their early training become familiar with all the principal geometric forms. They make use of them in many ways, and in their first work in construction they represent free-hand the geometric views of the simple objects used.

Now in about the sixth or seventh year of school it is customary to introduce geometric problems in addition to the various kinds of free-hand work; and what are these problems? They mainly relate to the drawing of lines in all their geometrical relations to each

NOTE.—A teacher in one of our schools has found this constructive drawing of great assistance in teaching arithmetic, when surface areas are to be determined. For instance, if the surface measurement of a box is required, the plan, and side and end elevations are drawn to scale, and the measurements marked on the drawings. Having these drawings before the eye, the pupils readily work out the problems. In looking over a set of arithmetic papers, I observed on each paper, drawings which represented the four sides of a room, with the doors, windows, and base-boards correctly located, and with the various measurements indicated on each. The pupils were required to find how many yards of wall-paper it would take to cover the walls.

The teacher informs me that in every case, where the work deals with objects, drawings to scale are first made of the objects, and, as a consequence, the pupils understand much better the problems, and much better results are achieved.

other; to the accurate construction of angles and the plane geometric figures. Now, instead of giving so much attention as hitherto to the construction of these forms abstractly, I would advocate more attention to the application of plane geometrical drawing to the construction of plans, elevations, and sections of solid objects; these drawings to be made to scale. By so doing we shall bring the study of practical geometry in the schools to definite practical results.

*Representation.*—I have dwelt upon the subject of Construction so long that it may have seemed to you that I came here with only this one thing in mind. Not so, however; a little space has been left in which to discuss Representation and Decoration. They have been accorded a second place in this paper for several reasons, one of which is that they have for a long time held prominent places in the schemes of drawing, while Construction has not until recently been even recognized. Moreover, I wish to show that constructive drawing forms the basis of representative, and in a measure of decorative drawing.

To ask pupils to represent an object pictorially, before the facts of its form are known, is a great mistake. But in many books, and also schools, the work is so arranged that pupils copy pictorial representations of objects, and also draw directly from the objects themselves without the slightest idea of the geometrical construction of the same. One might as well copy a picture of a house without any idea of the laws of perspective, and expect that knowledge would be gained thereby.

*How can the Pictorial Representation of Objects best be Taught?*—This branch of the subject, if strictly carried out, requires more individual instruction than any other. No two pupils see the object alike, and in our crowded schools of forty-five and fifty children, with no conveniences for object-drawing, and at the best but a small number of models to draw from, the question how it should be taught so as to be of the most profit possible to the pupil, is one which has troubled many, and has not yet been very satisfactorily solved.

We must, of course, begin with circular objects. The appearance of a circle in different positions of obliquity to the eye can be explained by the use of a large circular piece of paper or cardboard in the teacher's hand. After the proper practice by the pupils in drawing this in different positions, and in the use of the pencil in determining the proportional measurements, the various cylindrical objects are to be used; but how are the drawings to be made? Are they to be made directly from the object?

Unless a room is very well adapted for object-drawing (which is

rarely the case), and there is but a comparatively small number of pupils, my experience is that the results are very unsatisfactory if the pupils attempt to draw directly from the object. I will make a short quotation from a former address which will explain in part my method of work :

"If the space is to be filled with a cylindrical object, a cylinder, double cone, or vase may be used, and either the proportionate lengths of the various construction lines be given, or some one or more pupils may be required to work them out directly from the object. When these are sketched by all of the members of the class in their books, of one pupil may be asked what should be drawn at the top and bottom, and center if required, to represent the object, as he sees it; the width of one ellipse compared with another, and similar questions. Of another may be asked, what should be drawn, supposing the top to be on a level with the eye; of another, the center; and in this way each pupil in the room may be questioned about some one position, and then all be required to make a drawing of the object in one of these positions, which should be named by the teacher, that all may do the same. Their imagination is brought into play, and they learn to exercise their reasoning faculties. *Mentally* they all draw from the object; uniform and accurate work is the result. In a similar manner might be explained how rectangular objects, rings, square frames, and other objects in different imaginary positions are drawn by pupils; but this would lead to too much detail just now."

But some will say: "This is not model-drawing; we cannot call it model-drawing unless sketches are made directly from the object, and all measurements taken therefrom."

This I will not discuss, but will simply say that when the pupils take up drawing in the high school, and are given a group of models from which to make their first drawings in the prescribed course, but comparatively few need or receive much help, as they have become so accustomed to drawing in the most common positions the different geometric solids. Can we do much in the limited time devoted to drawing if we do not give some time to class work?

In this connection I will say that it seems to me well to have the constructive drawing of the object directly precede the representation, as many of the mistakes in representation are due to a failure to understand correctly the facts of the solid. On the left half of a page, therefore, the pupils may be required to make working-drawings of the object, while on the right half the appearance of the object in some familiar position may be shown.

Representation I would treat, therefore, as complementary to a study of the facts of objects,—to the construction of objects.

One point more: The drawing from objects in grammar schools should be from simple forms. It is a great mistake to require pupils to work from objects so complex in form and detail as to confuse pupils with too many lines. We should recognize the fact that instruction in drawing is primarily instruction in *seeing*, and that pupils fail in drawing more from inability to see than from inability to draw,

*Decoration.*—The term decoration is sometimes so used as to imply that it includes design, and all original designs, so called, must be arrangements of lines, units, and conventionalized forms in such a way as to cover a given space.

"Design," says Redgrave, "has reference to the construction of any work both for use and beauty, and, therefore, includes its ornamentation also. Ornament, on the other hand, implies merely the decoration of an object already constructed." Under the head of decoration, therefore, we are to teach simply surface decoration. I have remarked that construction not only is the basis for representative drawing, but that in teaching drawing in the public schools, where we have young children to deal with, constructive and decorative drawing are closely connected. The pupils must be led from simple to complex things through the illustrations gained in the use of familiar forms, and to know these familiar forms thoroughly they must become acquainted with all the facts of these forms.

Shall pupils be given geometric figures in which to make accidental combinations of straight and curved lines? I believe not. They should, rather, first learn to design good forms,—to design units. But how? I hear one say, "By copying ornamental figures in their drawing books, they gain a knowledge of good form;" but pupils do not gain that knowledge of good forms through the mere copying of them that one might suppose. The copy is before them and they see but one line at a time,—the line they are drawing; they make an accurate copy of the whole by accurately copying each line, while a thought of that which gives beauty to the whole does not, except rarely, enter their minds. They should, certainly, be trained to consider the whole form; but this can be done in no better way than by requiring them to imagine and draw forms for themselves; and these forms must first be familiar objects upon which they can use their reasoning faculties in regard to usefulness and appropriateness, and can be not only seen but handled.

As a proof of what has just been said about pupils not gaining a knowledge of forms through the mere copying of them, I offer the following,—an exercise given several years ago in all the schools of

the two highest grades. The pupils drew the construction lines for a vase, and were then told to draw a vase of good form similar in construction to some one of those previously drawn from copies in the book. But they were at a loss to know what to do. In some cases I made sketches on the board, and then quickly erased, in order to offer some assistance. The results were a great surprise, and were the same everywhere. I could hardly believe that those pupils who showed me such excellent copies in their books could be guilty of making vases so ugly and so useless in construction.

I think that pupils should no sooner begin to draw, say vase-forms, than they should learn to construct or design vase forms. I do not mean construct something entirely different from their copies, but they should learn to construct a beautiful form without a copy before them, and to know what gives to it its beautiful appearance, and to make from an ugly copy a drawing of good form. Having done this kind of work in the construction of familiar objects, they are better prepared to draw abstract figures or units, which units may afterward be incorporated into designs for surface decoration.

As the pupils advance from one grade to another and become acquainted with a greater variety of forms, both in the concrete and the abstract, their work of this kind, of course, advances from the simple to the complex. A drawing of a vase of a new pattern, or of an ornamental figure, may be put upon the board, analyzed before the class, and its various features explained. Rough sketches may be made to show how slight changes in parts would rob the whole of its beauty; and after everything possible of this kind has been explained, the drawing should be erased, and the pupils told to make a similar drawing, of good construction if a vase, and of a good decorative design if an ornamental figure; remembering that to reproduce exactly the drawing on the board should not be the principal thing in mind, but rather to construct or design a figure of good form, with all parts bearing the proper relations to each other.

Having found such work so very valuable in educating the eye to perceive good form in the construction of simple objects in the lowest grades, I think that one of the first things children should learn to do in decorative drawing is to design, in a similar way, simple ornamental figures symmetrical upon an axis. These figures may afterwards be combined to fill geometric forms; and when pupils have become familiar with simple units and the combinations of these units to form surface designs, they will be prepared to conventionalize leaves for purposes of design,—first from copies and then from the leaves themselves.

I have mentioned, and very briefly explained, the three divisions under which I think all the work in drawing must come, and, without claiming too much for myself, I think I may say that any system that does not include the three distinct divisions of constructive, representative, and decorative drawing cannot be recognized as complete. The best way to teach each division may remain an open question. You are to discuss this paper, and whether you accept or not what has been said, let me again remind you, in closing, that the first duty incumbent upon us as professional teachers of drawing is to emancipate ourselves from the confusing and non-educational array of technical terms so often used, and which have been quoted, and fix upon those fundamental principles which underlie the study of drawing in the public schools, and arrange them in regard to their educational and practical importance.

## CITY SYSTEMS OF MANAGEMENT OF PUBLIC SCHOOLS.

BY J. L. PICKARD, LL.D.

As a means of national defence, more or less importance is attached to popular education. In this country, at least, the policy of providing for the education of the people at public cost is well established. In the minds of American citizens the right of the free school to exist is not questioned. With other nations the system of American free schools is gaining favor. The limits are not well determined, though Congressional action, in the earlier days of our Republic, indicated an upper limit considerably above what some term the elementary branches. The same power which set apart for common schools one-thirty-sixth part of our national domain (afterward increasing the same to one-eighteenth) gave to each State organized upon public territory the right to two entire townships of land for the maintenance of a seminary of higher learning, or university, as it is now termed. It was without doubt the intention to extend education at public cost to the highest possible limit, that the citizen might be prepared for any demand his country could make, so far as that preparation was within the province of the schools.

But it is not my purpose to discuss this fundamental question. The subject of this paper refers rather to the method of administering the trust imposed upon those citizens who are residents of cities. The simplicity of rural life demanding no highly trained talent in carrying out its processes, is rapidly changing into a complex urban life, with varied and urgent demands for a wider and a higher education. Within the last eight decades cities of 10,000 people, or more, have absorbed population to such a degree that *one-thirtieth* has changed to *one-fourth* in marking the relative residents of city and country. With this marked growth of cities has come, also, a wider influence even over the life of the country. Wants are greater. Labor must needs be more productive. Wealth becomes more attractive. With all these conditions actively employed, competition daily presses capacity, and the weaker combatant goes to the wall. The fittest will survive. Since city life already enrolls one-fourth of our entire population, and exerts a controlling influence over the lives of a large majority of the remaining three-fourths, I need offer no apology for accepting an invitation to suggest a system of schools



for cities, assured in so doing that the interests of popular education are subserved in an important sense, provided discussion shall be awakened leading to a better administration of our city schools.

All public expenditures should have regard to the accomplishment of the greatest possible cost. *Given*, the end to be accomplished; *required*, the means absolutely necessary for its most effectual accomplishment. *Efficiency* and *economy* must both be kept in constant view, each by itself and each in relation to the other.

I do not mean by efficiency the working out of *any* end in the manner expected from the agency used, but rather the wise selection of an agency with reference to the best possible results attainable under the most favorable circumstances. In specific application it means the highest good of the pupil, his best preparation for the duties that are to be devolved upon him as a citizen.

The best machine is that which does its work most evenly, most speedily, with the least friction, with the least possibility of derangement, and with the least waste of material employed. The most efficient system of schools will be found the one with well-balanced parts of simplest construction, so organized as to make its capabilities commensurate with the end in view, and so administered as to bring out its capabilities to their fullest extent.

*Economy* needs definition. It is not to be measured by the "balance on hand" at the end of the year, but by the results that appear from the expenditure side of the account. It is not to be shown in small figures entered upon the contract, but in the character and ability and success of the contracting party. One hundred dollars may be so used that no economy appears in the use of a single cent. It may have been better thrown into a well before the service it has secured had begun. It may be so used that results attained would shame the financier that he had not given more for the service rendered. It is not the counting out of wages, but the gathering in of fruits which marks the economical administration. These may be truisms in other departments, but have not been sufficiently recognized in the educational world, and "thereby hangs a tale" of maladministration.

Before proceeding to suggestions in detail, it is proper to observe that a system of public schools has two sides, at least,—the *business* side and the *instructive* side,—distinct, and yet allied in offensive and defensive operations. Each needs watchful care, that neither may trench upon the province of the other, and that both may have constantly in view the good of pupils as wards of the State. Upon the business side we find the Board of Education with its officers and

committees. Upon the instructive side superintendents and teachers are found. The one provides appliances; the other uses them. The one puts the teaching-force into the field, and stands by it as support; the other, well supplied and well supported, enters vigorously upon the campaign against ignorance and in defence of intelligence and virtue, pillars of the State which they serve. In our larger cities there is a favorable opportunity for an entire separation of these elements in administration. In the smaller cities there may be a two-fold use of the superintendent,—a necessity to be deprecated; and as soon as possible the superintendent should be relieved of all mere business duties, except as advisory in matters which bring business and instruction into close relationship, such as in rules for the government of teachers and pupils, and in selection and assignment of teachers and pupils to particular parts of the work. But, even here, it is the business side coming over to that of instruction. It is better that the action of each side should be entirely distinct, free from direct interference with the specific work of the other, and yet understood as affording moral support. For example,—superintendent and teachers must take good care of the property placed in their hands, for this is an important part of the instruction. The Board of Education should be recognized as sustaining the teachers in the legitimate exercise of their authority and in the use of means enforcing discipline. To this end there should be an intelligent business element, and at the same time a practical teaching-force. How may these be most surely obtained?

The Board of Education, as at present constituted, is either an elective or an appointive body. Practically there is but little difference in results, for the appointing power is almost universally a political power representing the majority element, which would also appear in an elective board. It requires more grace than falls to the lot of an average mayor or common council to be entirely free from partizan bias. Exceptions sometimes appear. The theory of making every office an elective office is good, but it fails of the best results, especially when political excitement runs high, as is unfortunately too often the case in the cities of our country. There is no office within the gift of the people which should be so thoroughly severed from all political complications and possibilities as that pertaining to the education of the children. The farther the Board of Education can be removed from all contingencies of party politics the better. To this end the time of election or selection should be as far as possible from the heat of a political contest. The nominees, in case of election, should not be the product of caucuses, but presented by a

committee representing the prominent political parties of the time in equal numbers from each party; the nominating committee being selected by the central committees of the parties, each central committee naming an equal portion of the nominating committee. All parties will thus be in honor bound to support the nominees, each receiving the full vote of the entire constituency. There will then be entire freedom from any expressed or implied pledges, and no claim can be laid on account of special service rendered in the election. Each man thus elected will be conscious of having received the votes of political foes as well as friends. If this prove impracticable, I can not see any other feasible method of a popular election. The judiciary are as likely to be the safe depository of power to appoint as any other body of men. Thus much as to method of bringing the men into the office. How many shall be assigned to the business management of the school system? A small body in numbers is the most effective. There can be no shifting of responsibility. The entire Board will be a working committee, organized in sections for specific work, but engaged as a whole upon all general business affairs, such as the care of school property, the erection of school-buildings, the determination of salaries. One section of the committee would be specially delegated to confer with the superintendent as to qualifications of teachers, and their assignment; and another section to the control of educational funds. There is no city in the United States where the *work* is not done by less than ten men. From five to nine members of the Board of Education, selected with special reference to their general intelligence and business tact, will be found ample. The idea of representing nationalities, or localities, or peculiarities of sentiment, political or religious, is an erroneous idea, and is amenable to charges of partiality and of inefficiency. The selection of persons upon the grounds named is sure to bring into the Board of Education extremists; and want of harmony with its attendant neglect of higher interests, or such excessive harmony as is found in log-rolling practices, will surely be fatal to both economy and efficiency.

The next point to be considered is that of length of service. If experience has any value, continued service is most profitable. The cry for rotation in office should never be heard in its application to school authorities. The harm resulting from frequent changes will be widely felt. Incompetency of teachers often escapes the observation of the man just leaving an office, and fails to arrest the attention of his successor until too late for his action; and the same observation will apply to other features of the work.

One step more: the office of member of the Board of Education

should be a salaried office. The important service rendered is worthy of compensation. If any person elected sees fit to decline the salary, it is an act of benevolence. But some one will say, "Does not the offer of a salary prove a temptation to some impecunious incompetent?" The temptation is not half as great as that which lies concealed in some prospective perquisite, and an eye to the main chance is more intent upon the latent than upon the patent pecuniary reward. Again, those who select will feel more free to call their best friends into an office which furnishes some return for their valuable service, while "an empty honor" will be considered a sufficient reward for a hungry hanger-on.

To sum up this part of my subject: A small Board of Education, with long tenure of office, selected by some means as far as possible removed from all partizan influences, and paid well for services rendered, will prove both efficient and economical. The work of such a Board will be best subserved by giving them virtual control of the finances, even to the point of levying school-taxes. A maximum limit may be fixed by the legislative authority, but there should be perfect freedom as to amount to be collected within that limit. The best laborer must be sure of his tools. Money is the most efficient tool in the hands of a conscientious, working Board of Education, and they must be sure of its constant readiness for service.

As the public health is of equal importance with the public virtue, it is quite important that a good degree of medical knowledge should appear in those who administer the schools. A good, sensible physician should be found in every Board of Education,—not as one in many, but as a potent factor in all matters pertaining to sanitation. He should be associated with the superintendent most intimately in the determination of the course of study, and its general development in the school-room. Teachers and pupils need his watchful eye.

The business management now seems to me fully organized. Let us turn to the instruction-side for a few moments, —superintendents and teachers. The superintendent is properly the choice of the Board of Education, and should hold his office during good behavior, subject at all times to removal for cause, but never to the humiliation of an annual inspection and election. He represents in the work of instruction the prevalent sentiment of the business management, so far as their business has to do with teachers and pupils. For the time he stands in the place of the Board, acting promptly, and conscious that whatever he does must pass under review and be approved by the authorities whom he represents. He stands pledged to pupils

and to the public for the best possible use of all school appliances. But he cannot do the work alone. He stands general for the great army, with its divisions, its corps, its brigades, its regiments, its companies. His orders are supreme; his assignments should be unquestioned. Once organized, his forces may be subject to the most strict rules of the service as to assignments and promotions. It is plain that, while in constant correspondence with the school authorities, he should have a controlling voice in the selection of his teachers. How can a mechanic be held to account for the work he does, if he be compelled to use such tools as inexperience may furnish him? If the superintendent be a man of good common sense, of a thorough acquaintance with the work he undertakes, and of high integrity, — and no other should ever be brought into such a work, — he is fit to act untrammelled. He should be able to say to talent: "Cast in your lot with us. Your tenure of office shall be as permanent as your worth shall determine. You will be subjected to no annual examination, but you will be under daily supervision, — thorough, helpful, impartial. Of the reward for your services you need have no anxiety. Should places open that have a strong attraction for you, be sure that you are in the line of attainment and promotion; no stranger shall be preferred. This promise give to talent, native or acquired. If listlessness or conceit be allowed possession, and opportunities for improvement pass without your earnest determination to be better for their existence, then you will recognize the justice that lies back of the request for your resignation.

What courage would be inspired in a band of teachers thus led and thus addressed? This being interpreted is, Let all engaged in the work of instruction feel that their position is as permanent as is their merit.

In many of our cities the farce of an annual election of teachers is carried out. The plea is: "At the end of each year your engagement is at an end. You have no reason to complain if you are not reemployed; and then it gives us such a fine opportunity to get rid of you without a word of reason. We have all along known of your incompetency, but have felt that by limitation of contract we should soon be rid of you, and our consciences have thus been put to rest. The rights of little children weigh nought against the ease with which we discharge a solemn duty." The easy way proves the most insufficient in the end. Incompetence somehow has a winning way with those who take this easy way of doing their duty. But a question of greater importance lies at the door of entrance. If this question be properly answered, the door of exit may be bolted. Two classes of

applicants will seek admission,—those who have had practical acquaintance with the system from the pupil's side, and entire strangers. The means of judging of their fitness will be the same in a degree and yet the probability of judging correctly is greater with the former than with the latter class. Right here I would suggest a way of transforming this probability into a certainty. Every city system should have as one feature a normal school, with a school of practice and of observation attached, so that special professional training may be secured, and the opportunity be given candidates for the teacher's office to try the practical work under the eye of an experienced training teacher. This school of practice, in all respects similar to the other schools of the system, will prove itself as possessing a wonderful power of revelation,—held as a mirror before the tyro, and serving as a microscope to the observing eye of the superintendent. The intellectual acquirements of the native candidates will be quite thoroughly understood after years of careful inspection in this daily routine. The normal school will enable them to study the science of teaching, and the school of practice will give them control of the art. Successful examination as to literary acquirements before a board of professional teachers, and a good record from the normal school and school of practice, will serve as a ticket of admission through the entrance-door.

With strangers, successful examination and reliable recommendations will admit. Now both classes are in the vestibule. Yet another door must be passed. Success in temporary employment as occasion offers, in the absences of teachers upon the regular list, will show the way to the seats reserved for the competent. Candidates will wait in the vestibule until the opportunity for trial comes, and then will return and await their call to permanent service. The literary examination admits to the vestibule. The examination in practical work will determine the order of appointment.

The most difficult part of my task yet remains. It pertains to an outline of the work to be done,—the course of study. Its limitations I will not consider, except to say that, with the large number of well-endowed colleges and universities now in existence, it appears to me impolitic to embrace collegiate studies in the curriculum. The right to do so is unquestioned, if the people see fit to tax themselves or to act as trustees for a fund donated for the purpose by some benevolent citizen. But the expediency of such a measure may be doubted. The ground left for occupancy is that of the studies pertaining to the foundation upon which specialists and professional men may stand. In every department of industrial life men are wanted. Out of these

specialists will rise. The course of study should have reference to the development of manhood. The processes of civilization are carried forward most perfectly through intercourse. Language is the channel of intercourse. For a narrow field, widening it is true, but still restricted somewhat, the English language will suffice. But the broader field is opened by the extension of means of intercommunication. Railways, steamships, and telegraphs are making the world a family of kindred. We need to understand each other without the intervention of interpreters. The languages of Europe are made media of communication between the nations speaking these languages and others. The citizen of these United States is not thoroughly furnished unless he have at hand the means of communication with those into whose interests he is brought through commerce,—commerce of ideas as well as commerce of material wealth. But language-study has not alone this utilitarian application. The processes of acquisition and of comparison and of careful analysis are helpful to the strengthening of intellectual fibre, which weighs much on the side of influence. What now may be thought of this view, no one questions the immense value of an understanding and a facile use of the English language. More ability to read fluently does not insure an understanding of what is read. Least of all does it give the pupil the power of expression,—a power infinitely superior to mere enunciation. Language is both a means and a measure of culture. The observations of the scientist are of little value if unexpressed. If expressed clumsily, they are not properly understood. Homer uses the same word for *speech* and for *man*,—a derivation from the word to *shine*. By speech man shines. All allied studies which deal with man as a thinking and speaking being; knowledge-studies which give man something to speak about; history which reveals to him sources of influence and sources of failure as well, are essential. Man's limitations as to time and space enforce acquaintance with mathematics. Language, science, physical and metaphysical, history, and mathematics cover the field. Some acquaintance with each should be the possession of every child and the fullest acquaintance with each should be possible to every one.

There is but one universal language. It is addressed to the eye, and is easily comprehended, whatever the form of speech employed by those to whom it is addressed. The graphic method of illustration is of universal application. No one branch of study is more important than that of drawing. It is of highest importance in all practical studies, so called,—those which pertain to the manual industries.

My plan of a course of study is not complete without provision for a Manual Training School, apart from the usual routine, in a building specially adapted to the purposes. It has been frequently urged by those who have taken up a popular fancy, and have not had the insight necessary to a comprehension of it,—that our courses of study are defective in the direction of education for the laboring masses. Hence, say the hasty advocates, let us have manual labor introduced into every public school, so that the child may be trained to the life he is to lead. The theory is good; but will its advocates tell us something about its practical possibilities? Of the more than three hundred distinct manual industries, all cannot be introduced into each school. Which shall be pursued, and which neglected? Of the manual training schools deservedly popular and of infinite value, work in wood and iron is prominent, almost exclusive,—modeling in clay being associated in some. In what room of the school-building shall the forge, the lathe, the carpenter's bench be placed? The instruction of eighty per cent. of public school children is in the hands of ladies. Shall they pass apprenticeship in trades to which they have no calling, that they may teach indifferently a class of girls who will never enter these trades? Sewing may be taught, but must boys engage in the same? There is a more excellent way. Let fundamental studies be thoroughly taught, such as underlie all industries. Drawing is of great value to all. Let it not be neglected. Ability to read and to write well is an ever-pressing need. Control of a good English vocabulary is essential. A knowledge of what is within us and what is about us in nature's wondrous storehouse cannot be set aside. The wide world is drawn upon by every mechanic. He must know the sources most prolific and most profitable to his special calling and needs. There is enough to be learned to occupy the years of an ordinary curriculum. But let me not be misunderstood as underrating the value of manual training. A system of schools is not complete without its Manual Training School.

In summing up these briefly-sketched conclusions, let me say that I would have in my ideal system of schools for cities the best elements found in all at present existing, but by no means all found in any one system.

1. A small Board of Education carefully chosen from the most intelligent citizens for a long period of service, subject to no party in State politics or in religion, able to select a good leader in the work of instruction, themselves confined largely to the business side, and leaving to the superintendent of their choice the fullest freedom within the pecuniary limits their business sagacity determines as proper.



2. Superintendent and teachers carefully chosen after sufficient trial, and left to perfect freedom as to methods of instruction in the work assigned, responsible only for results. and paid according to merit as determined by trial ; secure in office so long as merit warrants ; encouraged to the best effort by the certainty of promotions within the ranks ; without the necessity of securing the means of support or of the needed aids to their work in employment out of school-hours ; and with salary attached to place and not to the sex of the occupant.

3. A course of study covering the work now preparatory to our best colleges, including a Normal and Training School for the education and discipline of teachers ; a Manual Training School for the special education of the future mechanics of the city, with special attention to such fundamental studies as are of highest value in every walk of life, and with opportunities for higher education for those who may aspire to professional life ; and all within the confines of what may properly be called public schools, dropping entirely the unfortunate distinctions made between primary, grammar, and high schools.

4. Such a popular support as shall leave the call for funds entirely to the discretion of the Board of Education, with such limits as State legislation may see fit to adopt ; an ideal system perhaps, but within the range of possibilities I firmly believe.

## THE NORMAL SCHOOL PROBLEM AND THE PROBLEM OF THE SCHOOLS.

BY H. H. STRAIGHT.

The first systematic studies ever made upon human beings with true pedagogical intent by those capable of observing and interpreting pedagogical facts, so far as we are aware, were the studies of Pereira upon deaf mutes, and those of Itard upon a savage idiot. The conclusions from these studies were : That the senses, one and all, can be subjected to physiological training by which their primordial capability may be indefinitely intellectualized ; that one sense may be substituted for another as a means of comprehension and of intellectual culture ; that the physiological exercise of one sense corroborates the action as well as verifies the acquisition of the others ; that our most abstract ideas of the external world are derived from materials furnished by the senses ; that educating the modes of perception is to prepare pabulum for the mind proper ; that the problem of education is to develop the senses, the intellect, the affective functions ; that the powers and faculties of the soul can only be reached through the development of a proper physical organization, which is to be the seat of their manifestations ; that the entire human being is a physiological unit for purposes of education. These noble results in pedagogical science form the rich legacy which the idiot and deaf mute have bequeathed to their more gifted brethren of the human race. They teach us the solidarity of the race as well as that of the individual.

Rousseau lived in the same street with Pereira, and was a frequent visitor in his school. Says Seguin : "The *Emile* is full of ex-

periments upon physiological teaching, which could only have originated in the school for the deaf mutes. So identical are the theories of the book with the practice of Pereira, and the first school where deaf mutes were taught to speak naturally, and the first treatise on education, whose object was to create not a subject but a man, stand side by side as the two indices on the road of modern education. Pestalozzi added no new conception to educational science, but gave a mighty impulse to ideas already born into the world. His weakness lay in his lack of scientific knowledge and practical insight; his strength, in his truly divine life for his kind. Froebel, after spending two years with Pestalozzi, concluded that our greatest educators, even Pestalozzi himself, appear too crudely, empirically, capriciously, and therefore unscientifically, to allow themselves to be led away from nature's laws; they do not appear, indeed, to recognize, honor, and cultivate the divinity of science."

Froebel's great work was to point out the true significance of a *child's play* in the education of the race; to indicate a method by which the *joy in producing*, which forms so large a part of the child's happiness, may be carried forward into the industries of mature years, deepened and ennobled by a knowledge of industrial relations; by experience of the value of industrial products, and, above all, by consciousness of duty done in the contribution made to human comfort and well-being.

According to Froebel's most faithful disciple and interpreter, the Baroness von Bulow, "We yet need minds of equal power which, rethinking Froebel's thought, shall clear up what is obscure and imperfect in his manner of expression, fill up the gaps, and furnish in an intelligible manner the commentaries necessary to carry the whole thought into execution."

The problem of the school needs restatement in such a form that, while it lays fast hold of the best thoughts and experiences of the past, it shall likewise embody the best hopes and aspirations of the present. The following is given as a provisional form of such restatement:

The human being must be considered a physiological unit for purposes of education. Soul-building means brain-building; brain-building means body-building. Every muscle and organ of the body, through appropriate exercise, must be placed in appropriate connection with the brain in order that it may become the appropriate servant of the mind. Every human being thus conceived is to be *industrially educated*; the entire work of the school must be reconstructed upon the basis of an enlarged conception of the word *industry*.

The industrial education to be thus furnished to each individual must consist of the following elements :

1. An industrial disposition which leads to a cheerful, and even happy devotion to some chosen employment.

2. Industrial knowledge, — such general and special knowledge as will put each individual in possession of the best human experience in the direction of his chosen vocation.

3. Industrial power,—such a development of physical, intellectual, and artistic power as will remove, as far as possible, the chances of failure, and by giving a just consciousness of strength, will enable each to work always with the hope and expectation of success.

Taking the best physiological knowledge the age affords under its guidance, the schools are to develop a body capable of enduring all the fatigues and strains which at least the ordinary exigencies of life are likely to bring upon it. Selecting the knowledge it is their duty to give, the schools are to impart this knowledge in accordance with the laws of mental assimilation, as discovered and interpreted by the best students of mental growth, to the end that mental dyspepsia may be avoided, and that the best intellectual conditions may exist for the quick and accurate solution of at least the ordinary problems of life.

Under the guidance of true artistic thought and feeling, the schools must develop such a sense of the beautiful as will enable our people not simply to enjoy the beautiful in the objects about them, but such as will give a *finesse* and finish to whatever work they undertake, whether it be the culture of corn, the making of a dress, the building of a house, or the painting of a picture. Every workman should have, in the largest possible degree, the fine feeling of an artist, while every artist should be recognized as a working-man. Over all this knowledge and these powers a conscience must preside that can say *might* and *might not* so loudly and distinctly that its commands cannot go unheeded. The school thus organized will be the natural outgrowth of Froebel's idea. His plays will be revised and extended beyond the kindergarten. The dramatic instinct of children will thus be utilized to make the children and youth of the public schools thoroughly familiar with the leading thoughts, of the chief industries and the general machinery of commerce and citizenship. These plays can be so varied as to give the best possible discipline in expression through voice and gesture.

The occupations of the kindergarten will be revised and extended, making the expression of thought in material form an important element throughout the whole course of the public school. The ac-

tivities of infancy would thus lead to those of the kindergarten, these to the public schools, and these again to the more special activities of the technical school and university. Thus nursery, kindergarten, and public school would be what they ought to be, — a road leading up the base of the mountain of industry and art, thence branching to the various heights of the special industries, each special height having at its base a special school to fit its students for its climbing. The public schools, as thus conceived, would not fit their students for any *special calling*, but would enable each student to choose intelligently the employment for which he is fitted by special taste and power. There would be laid the only possible foundation for intelligent sympathy among the different classes of workers.

The change from one occupation to another, the necessary incident of growing industries, would be greatly facilitated, and intelligent labor would come into full possession of its rich inheritance from the past. This is all to be accomplished not so much by a radical change of the subjects of school-study as by a modification of the materials used in these studies, and by making all the work illustrate and enforce certain great ideas.

It has been the narrow conception of the mission of object lessons, as well as the mechanical methods of giving them, that has made them yield such meagre results. The three R's must ever remain the fundamental studies of the school, but they must be taught not as an end, but as means, — their true place in the life and thought of the world must be shown. If no industrial training goes along with them they are apt, as Miss Nightingale observes, "to give rise to a fourth R, — of *rascaldom*."

Our normal schools and pedagogical departments must train teachers and superintendents, who, through parents' meetings, educational receptions, unions, — through press, platform, and pulpit, can arouse public sentiment, and send abroad the feeling that to train up a child in the way he should go is the noblest and most worthy work to which God can call any human being. For a man to take charge of a system of schools, make out a course of study, impose it upon a whole community, without making an honest and vigorous effort to acquaint the parents with the aims, methods, and results of the schools, — without trying in all earnestness to build into these schools the best hopes and aspirations of the entire community, — is a species of bossism as dangerous to all true progress as political bossism can possibly be.

One great need is a systematic plan for gathering pedagogical statistics, by which every intelligent parent, teacher, citizen can

be converted into an observer, to gather facts to be interpreted by those most competent. This is the only way out of the anarchy at present prevailing in educational thought, and the only method by which a science of education can be built up. Men of wealth have sent expeditions to every part of the earth, have endowed schools for the exploration of every portion of the physical universe; but where is the man or the men who shall first equip a normal school, or pedagogical department in a university, with brains and means for the proper exploration of the human soul in the different stages of its development, so that teacher, minister, and parent can secure all the light that the most patient and skillful investigation can give in their work of building such men and women as the world needs?

## MANUAL TRAINING.

BY PROF. C. M. WOODWARD.

"By their fruits ye shall know them. Do men gather grapes of thorns, or figs of thistles."

In a recent address before the Teachers' Association of Missouri, I attempted to show the narrowing, misleading, and deforming influence of our popular system of education. From the day when the children enter school, whether from the nursery, the door-yard, the street, or the kindergarten, they are turned into certain narrow, well-worn paths, bordered by high and well-nigh impassable walls. Instead of leading out equally to all parts of the busy working-world, lying on all sides of the temple of learning, these paths conduct to a few portals through which the school-men strive to force all their graduates into the world of active life. If, forsooth, the student-traveler does not choose to enter the portals of the Law, Theology, Medicine, Teaching, or possibly Engineering, he is looked upon as one who has made his journey to no great purpose. He should have deserted the ranks long ago, and now he must needs climb over the walls and find his way as best he can into or through other fields to other gates. I protested strongly against the bad policy and the wrong of taking away from children their right of choice; of leading them without their knowledge or consent away from half the needful occupations of men, and confining their attention to a fractional part of what is their birthright.

The walls that hem them in, I said, were built upon the broad foundations of superstition, prejudice, and pride. The walls themselves are chiefly of *books*,—books in all languages, living and dead; towering worlds of what are to the children dead, meaningless words, which shut out the living and significant world of action, of living issues, and of material things. Who built those walls? Our fathers began them; human slavery, which compelled everything pertaining to labor and industrial life to wear its badge, added greatly to their height; hordes of book-makers, with their omnipresent and cunning agents, are laying new courses every day; and finally, perhaps, most powerful of all in this wall-building are the teachers themselves, who, in their professional zeal and pride, value most highly those things which most clearly distinguish their vocation, and which most separate them from other professions and from the working-world.

It is not my purpose now to dwell upon these points. They have not forced themselves upon me alone, and not unfrequently have they found forcible expression. On the very day that I addressed the State Association at Sweet Springs, Mo., Mr. Charles Francis Adams, Jr., delivered his Phi Beta Kappa oration at Harvard. Some of our thoughts ran surprisingly in the same vein. I deplored the fact that at Harvard I had spent the whole Sophomore year trying to read the orations of Demosthenes, chiefly that upon "The False Legation." So imperfect was my mastery of the language (and yet I was an average scholar) that I could not for myself see that Demosthenes was eloquent,—I learned that from my Greek history. Those orations (which I have looked at but once since, and that was to select a Greek declamation for a boy graduating from my school, and which, of course, no one understood at all.)—those orations had not then, and can never have, one-tenth the interest of Motley's *Dutch Republic*, of which I never heard one word while in college. I also expressed my deep regret that in place of the years spent upon Greek, I had not devoted the time to learning the arts and studying the thoughts of the intelligent working-world of to-day. Said Mr. Adams to the picked scholars of Harvard, referring to his own experience there :

"As a training-place for youth, to enable them to engage to advantage in the actual struggle of life, to fit them to hold their own in it and to carry off the prizes, I must, in all honesty, say that, looking back through the years and recalling the requirements and methods of the ancient institution, I am unable to speak of it with respect. Such training as I got, useful for the struggle, I got after instead of before graduation, and it came hard ; while I never have been able, and now, no matter how long I may live, I never shall be able, to overcome some great disadvantages which the superstitions and wrong theories and worse practices of my Alma Mater inflicted upon me. . . .

"The college fitted us for this active, bustling, hard-hitting, many-tongued world, caring nothing for authority and little for the past, but full of its living thought and living issues, in dealing with which there was no man who did not stand in pressing and constant need of every possible preparation as respects knowledge, exactitude, and thoroughness,—the poor old college prepared us to play our parts in this world by compelling us, directly and indirectly, to devote the best part of our school-lives to acquiring a confessedly superficial knowledge of dead languages. . . .

"I shall hold that I was not myself sacrificed wholly in vain, if what I have said here may contribute to so shaping the policy of Harvard that it will not much longer use its prodigious influence toward indirectly closing for its students, as it closed for me, the avenues to modern life and living thought."



Those are brave words, fellow-teachers, and from the bottom of my soul I believe that they are just and true. Neither Mr. Adams nor myself object to the study of the classics. We strive to recognize their place in the world of letters, and we would protect them from the shallow superficiality which is bringing them into disrepute. But we say, let them occupy their proper place and share of attention. Their sphere is special, and should be left to specialists. Let them not crowd out what are to ninety-nine of every hundred more useful, and therefore more valuable work. Mr. Adams refers to Harvard College, but as I said in Saratoga last year, the high schools and academies ape the colleges, and the grammar schools take their cues from the high schools.

"By their fruits ye shall know them." What are the fruits of this narrow system of literary and abstract training? Step out into the world and see. Society is dismembered. On the one hand is the aristocracy of those elaborately taught in the schools, filling to overflowing the so-called intellectual occupations with neither accurate knowledge of, nor sympathy for, those who labor and who form the other class. The fruit of their schooling is their withdrawal from the fields of manual labor under the promise of directive power both over their fellow-men and over the forces of nature. And yet how much excellent material is spoiled thereby! How large a per cent. of our educated people choose their occupations wrongly! How many of them fail either to direct their fellows, or a machine, or themselves successfully, and so eke out a miserable existence,—the drones and agitators of society.

Mr. H. K. Oliver, of Salem, Mass., said, ten years ago: "Our system of education trains boys not to become better craftsmen, but to be unwilling to be put to any kind of craft."

Hon. Edward L. Pierce says: "Our high schools are multiplying the number of young men and women who turn from farm, mechanical and domestic work, and seek employment as clerks and scriveners. As results there is a dearth of men fitted for surveying, mining, road-making, bridge-building, and farming."

Gov. T. T. Crittenden, of Missouri, in a recent message to the Legislature, said: "In our ordinary and more advanced schools the only vocations aimed at, and in which positive interest is aroused, are commerce, buying and selling, banking, reckoning accounts, keeping books, and the so-called learned professions. The ordinary school-boy gets the idea that it requires no education to be a mechanic, hence he aspires to what is called a higher profession, a higher avocation, and foolishly learns, from vicious sources, to despise both draft and craftsman."

W. H. Riehl, speaking of Germany, says : " Other nations need not envy us the preponderance of the intellectual *proletariat* over the *proletaires* of manual labor. For man more easily becomes diseased from over-study than from the labor of the hands, and it is precisely in the intellectual *proletariat* that there are the most dangerous seeds of disease."

And George Eliot, speaking also of Germany, where the schools occupy either one narrow extreme or the other : " Germany yields more intellectual produce than she can use and pay for."

How many of those who thus go wrong live long enough to understand their errors, and have the strength and independence to acknowledge them ?

Let us turn now to the other side, and consider more directly the fruits of manual training. By manual training I do not mean merely the training of the hand and arm. If a school should attempt the very narrow task of doing merely that of teaching the manual details of a particular trade or trades, it would, as Felix Adler says, violate the rights of the children. It would be doing the very thing I have all the while been protesting against. That, or very nearly that, is what is done in the great majority of European trade-schools. They have no place in our American system of education.

The word "manual" must, for the present, be the best word to distinguish that peculiar system of liberal education which recognizes the manual as well as the intellectual. Note distinctly, we do not wish nor propose to neglect nor underrate literary and scientific culture ; we strive to include all the elements in just proportion. When the manual elements which are essential to a liberal education are universally accepted and incorporated into American schools, the word "manual" may very properly be dropped.

I use the word "liberal" in its strict sense of "free." No education can be "free" which leaves the child no choice, or which gives a bias against any honorable occupation ; which walls up the avenues of approach to any vocation requiring intelligence and skill. A truly liberal education educates equally for all spheres of usefulness ; it furnishes the broad foundation on which to build the superstructure of a happy, useful, and successful life. To be sure, this claim has been made for the old education, but, as we have seen, the claim is not allowed. The new education has the missing features all supplied. The old education was like a two-legged stool, and of course it lacked stability ; the new education stands squarely on three legs, and it is stable on the roughest ground.

It was once my fortune to be a soldier, and the familiar evolutions

of troops often furnish me with suggestive illustrations. One occurs to me now. The education of a boy, with his various faculties and appetites, for the struggle of life, is like preparing a regiment of ten companies for the ordeal of fire in the line of battle. If some of the companies are in good condition, while others are altogether unarmed and undisciplined; if some are dressed up sharply on the guide, while others are straggling miles behind, will the battalion be likely to do its duty? Think you there will be time, when face to face with the enemy, to bring up your undisciplined stragglers and instruct them in the first elements of military discipline?

In a manual training school we endeavor to have every company in its place, every arm in perfect condition, to always dress up on the color-sergeant, and to be ready for the foe at any moment.

I claim as the fruit of manual training when combined, as it always should be, with generous mental and moral training, the following:

1. Larger classes in your grammar and high schools.
2. Greater stability and perfection of character, moral and intellectual.
3. Sounder judgments and more correct estimates of men and things.
4. Better elections in the choice of occupations.
5. Higher spiritual and material success.
6. The elevation of many of the occupations from the realm of brute, unintelligent labor to one requiring and rewarding cultivation and skill.
7. Greater commercial, industrial, and intellectual progress.
8. The solution of the vexed labor-question.

I will briefly touch on these points:

1. Boys will stay in school longer than they do now. This conclusion is based on observation. You know how classes diminish as they approach and pass through the high school. The deserters scale the walls and break for the shelter of active life. The drill is unattractive, and, so far as they can see, of comparatively little value. *The Cleveland Herald* recently gave 2,701 as the number of pupils entering the grammar schools of that city. At the end of the fourth year, when the high school is reached, the number is reduced to 1,151. Here is the great turning-point. The pupils are 14 years old. The question is, Work or school? For more than half the answer is, Work. 545 enter the high school. The number falls to 237 the second year. The third year it is 145, and but 57 appear the last year. Superintendent Hinsdale, in his address last summer before the Ohio Association at Chautauqua, put the attendance thus: "Of 108 pupils

who enter the primary school, 60 complete the primary, 20 finish the grammar, 4 are found in the second year of the high, and 1 graduates from the high school." These figures are for both boys and girls. At the end of the course the boys are only about one-fourth of the whole. In St. Louis, the average age of pupils withdrawing from the public schools is 13½ years. [See my article on "The Age at which Pupils Withdraw from the St. Louis Public Schools," in the *American Journal of Education* for May, 1879.]

Now, from the influence of manual training upon boys, and indirectly upon the parents, I am morally certain that its introduction into the last year of the grammar and into the high schools, would add at least a year to the average term of schooling. Regret it and explain it as much as you like, neither fathers nor sons think the training of the higher classes worth what it would cost to get it. The figures show this conclusively. Add the manual elements, with their freshness and variety, with their delightful shop-exercises, and their healthy intellectual life, and *the boys will stay in school*. I know this to be true. I said to a grammar-principal in St. Louis the other day: "Put a course of training in the use of wood-working tools into your last year, and your eighth-grade class will be crowded with boys from all parts of the city, *who otherwise wouldn't go to school at all*." He visited and studied our school, and concluded that I was right; and now he has asked the School Board for authority and means to carry out the suggestion.

If Mr. Seaver opens a public manual-training school in Boston for 300 boys, he will have 1,000 applications for admission during the three years he is organizing the complete school. Will this increase the cost of schools? Of course it will, but a good education always costs, and the money will be well invested, and those who now grumble at the school-tax will be silent.

2. Stability and perfection of character. Prof. Felix Adler has pointed out, with great force and elegance, the influence of the exercises of the shop upon the formation of character. This influence, he holds, will be "nothing short of revolutionary, inasmuch as it will help to overthrow many of the impure conceptions that prevail at the present day." (*Princeton Review*, March, 1883, page 149.) The tasks we set are not to be judged by commercial standards; the articles we make are not to be sold; they have no pecuniary value; they are mere typical forms; their worth consists only in being true, or in being beautiful, as the case may be.

"A habit is thus formed of judging things in general, according to their intrinsic rather than their superficial qualities. Gradually, and almost in-

sensibly, the analogy of the work performed on outward objects will be applied to inward experience. A delicate sensibility to true and harmonious relations will be engendered. The pupil can be taught that, in the world of thought, and feeling, too, truth and harmony of relation are the sole ends to be sought. He can be exhorted to undergo similar toil, to be prepared for similar failures and disappointments, in order to realize at last something of the same inward perfection, which is to be his only and all-sufficient reward. Thus, while he is shaping the typical objects which the instructor proposes to him as a task ; while he pores silently, persistently, and lovingly over these objects, reaching success by dint of gradual approximation, he is at the same time shaping his own character, and a tendency of mind is created from which will eventually result the loftiest and purest morality."

But I am met here by such excellent men as Superintendent Hinsdale, of Cleveland, with the objection that I am aiming at an impossibility. That if I attempt to round out education by the introduction of manual training, to develop the creative or executive side, I shall certainly curtail it of elements more valuable still. That the educational cup is now full ; and that if I pour in my gross material notions on one side, some of the most precious intellectual fluid will certainly flow out on the other.

Now I deny that the introduction of manual training does of necessity force out any essential feature of mental and moral culture. The cup may be, and probably is, full to overflowing, but it is a shriveled and one-sided cup. It is as sensitive and active in its own defence as are the walls of the stomach, which, when overfed with ill-assorted food, contracts, rebels, and overflows, but which expands and readily digests generous rations of a various diet. The figure is not too strong. Did you ever see one whose mind was nauseated with spelling-books, lexicons, and grammars, and an endless hash of words and verbal definitions ? And did you, in such a case, call in the two doctors, Johann Pestalozzi and Frederick Froebel ? And did you watch the magic influence of a diet of *things* prescribed by the former, and the effect of a little vigorous practice in *doing*, in the place of *talking*, under the direction of the latter ?

The students of a well-conducted manual training-school are intellectually as active and vigorous as in any high school. Nay, more, I claim, and I have had good opportunity to observe the facts, that even on the intellectual side the manual-training boy has a decided advantage. I have been in charge of both kinds of school, and I know whereof I speak. The education of the hand is the means of more completely and efficaciously educating the brain. Such is, also, the conclusion of Felix Adler. And Mr. Charles G. Leland says :

"The boy or girl who learns to design patterns, and work them out, is not only prepared by so doing for some more serious occupation, but also becomes cleverer intellectually. If we take two boys or girls of the same age and of the same brain-power, and give them the same book-studies, but allow one to occupy part of his leisure in learning to draw and work brass, while the other spends an equal amount of time in aimless amusement, it will be found, at the end of a year or two, that the former is by far the cleverer of the two."

I would go a step further than Mr. Leland. When the limit of sharp attention and lively interest is reached on any subject, then you have reached the limit of profitable study. If you can hold the attention of a class but ten minutes, it is worse than a waste of time to make the exercise fifteen. The weary intellects roll themselves up in self-defence, and suffer the pelting as patiently as they can, but the memory of that hour of torment lingers and throws its dreadful shadow over the exercise as it comes up again on the morrow; and how automatically, as these over-taught children take their places again, do they begin to roll themselves up into an attitude of mental stupidity! Intellectual growth is not to be gauged by the length or number of the daily recitations. I firmly believe that in most of our schools there is too much sameness and monotony; too much intellectual weariness and consequent torpor. Hence, if we abridge somewhat the hours given to books, and introduce exercises of a widely different character, the result is a positive intellectual gain. There is plenty of time if you will but use it aright. Throw into the fire those modern instruments of mental torture, — the spelling and defining books. Banish English grammar, and confine to reasonable limits geography and word-analysis. Take mathematics, literature, science, and art, in just proportion, and you will have time enough for drawing, and the study of tools and mechanical methods.

Upon the question of the intellectual effect of manual training, I beg to quote a few words from a report I read on the day when our first class graduated in June:

"Our exhibition to-day is not limited to a display of drawings, shop-work, and manual skill; we have had recitations in algebra, geometry, natural philosophy, chemistry, Latin, history, and English composition. In thus arranging our program, I have recognized the fact that nearly all persons admit the entire practicability and reasonable success of all the manual features of our school. The theory and the use of tools is as readily taught as arithmetic or Latin. But the question has remained in many minds, particularly among teachers: 'Do the pupils of a manual-training school prosecute ordinary school-work with an interest and success equal to that

observed in other schools?' They ask: 'Does not the interest which these boys manifestly take in their tool-work, in fact and of necessity, diminish their interest in and love for their books?' This is a natural inquiry, and some of our shrewdest visitors of late spent considerable time in our recitation-rooms searching for an answer to this question. Those of you who have listened to recitations in this school may be prepared with an answer. The testimony of our teachers, some of whom have had several years' experience in other schools, is very pertinent here. They all say that these boys do better work than do boys of the same grade without the stimulus of the manual training.

"My own conclusion, based upon the observation of the influence of manual education for at least eight years, — (for we had manual training with the students of our polytechnic school of Washington University, St. Louis, several years before the school was in existence),—my conclusion is that not only does our workshop not detract from the interest boys take in books, but it stimulates and increases it, either directly or indirectly. In mathematics, physics, mechanics, and chemistry, the help is direct and positive. Note, for instance, the mental arithmetic involved in the execution of a pattern from a working-drawing. No one can learn from a book the true force of technical terms or definitions, nor the properties of materials. The obscurities of the text-books (often doubly obscure from the lack of proper training on the part of the author) vanish before the steady gaze of a boy whose hands and eyes have assisted in the building of mental images. No classes in physics or chemistry were ever so ready as ours to help illustrate their text-books.

"Then, on the literary side, the habit of clear-headedness and exactness in regard to the minor details of a subject, which is absolutely essential in a shop, stretches with its wholesome influence into their study of words and the structure of language. As Felix Adler says, the doing of one thing well is the beginning of doing all things well. I am a thorough disbeliever in the doctrine that it is educationally useful to commit to memory words which are not understood. The memory has its abundant uses, and should be cultivated; but when it usurps the place of the understanding, when it insidiously beguiles the mind into the habit of accepting the images of words for the images of the things the words ought to recall, then the memory becomes a positive hindrance to intellectual development. The influence of manual training, when associated, as it is here, with mental culture, is intellectually and morally wholesome."

Dr. S. S. Laws, president of the University of Missouri, in a recent public statement, said that the learning of a trade was incompatible with the attainment of high mental cultivation. For, said he, when physical exercise becomes toil, there is a drain on the strength which must be recuperated before either mental or physical effort can be made again to advantage.

Now he was thinking of hard, wearisome toil, like that of the day-laborer with his ten hours of hard work. And on that basis he is of course entirely correct; but his remarks have no application to the students of a manual-training school. Our boys are never weary, and in their estimation the shop-hours are too short. The effect is like that of agreeable, judicious exercise, and the mental effect is positively good. From my own experience, I know the value of interesting exercise. By a daily row of an hour's length I am made capable of more and better intellectual labor; but to be a waterman and toil at the oar would unfit me for anything but sleep.

I confidently reassert my claim, that judicious manual training,—*training*, mark you, —conduces to perfection of mental and moral character. The finest fruit of all education is character; and the more complete and symmetrical, the more perfectly balanced the education, the better the fruit. Does any one ask for fuller details of our methods of instruction? I must not dwell upon them here: they are fully stated in our Fourth Prospectus, which may be had for the asking.

3. My third division of the fruit almost goes without saying. Men of sound judgment, who correctly estimate men and things, are said to possess common sense. We aim to cultivate that kind of fruit. Boys who put every theory to the practical test, who probe and gauge every statement and appliance, with whom authority and tradition, the bane of too much classics, have little influence, and who, therefore, have some conception of the proper perspective of human progress and human history, are apt to focus correctly upon the world and society of to-day.

4. My next point, the Choice of Occupation, is one of the greatest importance, because out of it are the issues of life. An error here is often fatal. But to choose without knowledge is to draw as in a lottery, and when boys know neither themselves nor the world in which they are to live, it is at least an even chance that the square plug gets into the round hole.

Parents sometimes complain that their sons do not have a decided taste for a particular kind of work, and a wish to follow a particular kind of vocation. As a rule these complaints are very unreasonable. How can one choose wisely when he knows so little? Allow me to quote a few words from our catalogue:

"It is confidently believed that the developments of this school will prevent those serious errors in the choice of a vocation, which often prove fatal to the fondest hopes. It is not assumed that every boy who enters this school is to be a mechanic. Some will find that they have no taste for



manual arts, and will turn into other paths,—law, medicine, or literature. Some who develop both natural skill and strong intellectual powers will push on through the polytechnic school into the professional life as engineers and scientists. Others will find their greatest usefulness, as well as highest happiness, in some branch of mechanical work, into which they will readily step when they leave school. All will gain intellectually by their experience in contact with things. The grand result will be an increasing interest in manufacturing pursuits, more intelligent mechanics, more successful manufacturers, better lawyers, more skillful physicians, and more useful citizens."

Will it be to the point if I tell you what our graduates have chosen to do? The result of their choice lies beyond our knowledge in the future, but you may wish to know what, after three years with us, they wish to do. Will it tell against, or for the value of, the school if I say that more than half the class wish to begin life with some form of manual labor, as mechanics or draughtsmen? Does it make for, or against, the system if I say that out of twenty-nine graduates eleven will continue their studies in the higher department of the polytechnic school with a view to becoming finished engineers? Six or seven wish to enter shops and become thorough machinists, several would become architects, one an engraver, one a blacksmith, one a bricklayer and builder, one a stock-raiser, one a dealer in real estate, and one, about the ablest member of the class, is to be a farmer. All had been taught the principles of book-keeping, yet not one wished to be a book-keeper or a clerk. All are willing and able to work.

5. Correct choice brings success in all the elements of a manly career. The man who chooses correctly is happy in his work; his labor blesses and enriches both society and himself. Success does not imply wealth, but it does imply competence. It implies the making the most of one's self, according to capacity.

We hear much, particularly from our friend Dr. Harris, of directive intelligence as a great end, or a means to a great end. But he who would successfully direct the labor of other men must first learn the art of successful labor himself; and he who would direct a machine properly must understand the principles of its construction, and be personally skilled in the arts of preservation and repair. Mr. Harris, therefore, tells but a half-truth when he says that [EDUCATION for May-June, 1883] "the practical education is not an education of the hand to skill, but of the brain to directive intelligence," and the connection in which this is said contains something rather disparaging to manual labor. I do not claim to fully understand him, and I may be in error, so you shall judge for yourselves. He says :

"The new discovery (the invention of a new tool) will make the trade learned to-day, after a long and tedious apprenticeship, useless to-morrow. The practical education, therefore, is not an education of the hand to skill, but of the brain to directive intelligence. The educated man can learn to direct a new machine in three weeks, while *it requires three years to learn a new manual labor.*"

This last sentence is not clear to me. As to directive intelligence, I respectfully submit the following as a substitute for the dictum of Mr. Harris :

"The practical education is, therefore, an education of the hands to skill and of the brain to intelligence. The combination will give the highest directive power."

This matter of directing a machine reminds me of a story told of Boston, over twenty years ago, in the *Massachusetts Teacher*. It was reported at the Hub that in one of the great cities of the West an establishment had succeeded in making a steam fire-engine of great efficiency. (Those Western cities have a way of taking the lead sometimes.) So Boston ordered an engine, taking a guarantee that it should work so and so. The machine arrived, and was exhibited by its makers. Its performance was marvelous, and altogether satisfactory ; so it was accepted, paid for, and the makers went home. A picked crew of active Boston boys was placed in charge of the new-comer, and people almost longed for a big fire that they might witness its sudden extinguishment. The big fire came and so did the machine, but the water failed to rise to the exigency of the occasion. It hissed and foamed and screamed, but threw no water. It was a great disappointment. The next day it was sent to a shop and overhauled. The next fire it failed again. The city fathers then turned round and sued the makers for selling them a machine that wouldn't go. The maker came on to defend himself. Said he : "Gentlemen of Boston, that machine was all we claimed for it. It was made by the most skillful workmen, and, in their hands, it worked to perfection, as you yourselves saw. The men you placed over it were without skill, and you sent it to a locomotive-shop, where they don't know what fine workmanship is. Put the machine in proper hands and it will redeem itself. What you evidently need here in Boston is *directive intelligence.*"

6 and 7. I claim next, as fruit of the introduction of manual education, the elevation in honor and respect of the manual occupations of men. A brute can exert brute strength ; to man alone is it given to invent and use tools ; hence man subdues nature and builds art

through the instrumentality of tools. Says Carlyle: "Nowhere do you find him without tools; without tools he is nothing; with tools he is all." To carry a hod one needs only the muscles of a brute. To devise and build the light engine, which, under the direction of a single intelligent master-spirit, shall lift the burden of a hundred men, requires human intelligence and human skill. So the hewers of wood and drawers of water are in this age of invention replaced by planing-mills, and water-works requiring some of the most elaborate embodiments of thought and skill. Can you stand beside the modern drawer of water, the mighty engine that day and night pumps from the Father of Waters the abundant supply of a hundred thousand St. Louis homes, and not bow before the evidence of "cultured minds and skillful hands" written in blazing characters all over the vast machinery?

In like manner every occupation becomes ennobled by the transforming influence of thought and skill.

The farmer of old yoked his wife with his cow, and together they dragged the clumsy plow or transported the scanty harvest. Down to fifty years ago the life of a farmer was associated in all minds with unceasing stupefying toil. What will it be when every farmer's son is properly educated and trained? Farming is rapidly becoming a matter of horse-power, steam-power, and machinery. Who, then, shall follow the farm with honor, pleasure, and success? Evidently only he whose cultivated mind and trained hand makes him a master of the tools he must use. With his bench and sharp-edged tools, with his anvil and his forge, his lathe and his tap, he will "direct" his farm-machinery with unparalleled efficiency.

Do not suppose, as some appear to do, that the continued invention of tools will diminish the demand for skilled labor,—for, on the contrary, it will increase it. Said Mr. William Mather, of Manchester, England, to a Philadelphia reporter a few days ago, "The higher the development of mechanical contrivances to reduce merely manual labor, the greater in other directions will be the demand for a finer skill and mechanical knowledge." In general, whenever in the progress of the arts an occupation involves the skillful application of scientific principles; when its instrumentalities are the products of close observation, logical thought, and manual skill, the dignity and attractiveness of the occupation is greatly increased.

Manual exercises, which are at the same time intellectual exercises, are highly attractive to healthy boys. If you doubt this, go into the shops of a manual-training school and see for yourselves. Go, for instance, into our forging-shop, where metals are wrought through

the agency of heat. A score of young Vulcans, bare-armed, leather-aproned, with many a drop of honest sweat and other trademarks of toil, stand up to their anvils with an unconscious earnestness which shows how much they enjoy their work. What are they doing? They are using brains and hands. They are studying definitions. They are looking out in the only dictionary which really defines the meaning of such words as "iron," "steel," "welding," "tempering," "up-setting," "chilling," etc. And in the shop where metals are wrought cold (which, for want of a better name, we call our machine-shop), every new exercise is like a delightful trip into a new field of thought and investigation. Every exercise, if properly conducted, is both mental and manual. Every tool used and every process followed has its history, its genesis, and its evolution.

I cannot expect you all to sympathize with me fully here. We teachers have been more given to studying the derivation of words than of tools, though the latter are full of the thoughts that words are inadequate to express.

I have been speaking of the shops of the manual-training school, not of the ordinary factory. In the latter everything is reduced as much as possible to a dull routine. Intellectual life and activity is not aimed at. The sole object of the factory is the production of articles for the market. In a manual-training school, on the other hand, everything is for the benefit of the boy; he is the most important thing in the shop; *he is the material to be finished*. Such boys leave the school with no suspicion that labor is a curse; that a pair of overalls and a hard hand are things to be ashamed of. They have been taught to use their brains and hands together. They will find that in the world that is a thing too rarely done.

These active, thinking boys, the products of the new education, are going to redeem the world. Through them the age is to lose nothing of its high intellectual life; it will rather gain from its broader foundation. Through their aid such an age of invention as we have never seen will surely come. Colonel Jacobsón, of Chicago, says: "When all our boys shall be educated in manual-training schools, the inventive genius of the country will be stimulated beyond all conception. The skill engendered will be a protection to home industry such as the most radical protectionist has never yet dreamed of. It will put an end to all foreign competition in American markets."

This brings me to, and sufficiently covers, my seventh point of commercial and industrial progress.

8. Finally, I claim that the manual training school furnishes the solution of the problem of labor *vs.* capital. The new education

gives more complete development, versatility, and adaptability to circumstance. No liberally trained workman can be a slave to a method, or dependent upon the demand for a particular article or kind of labor. With every new tool and new process the cultivated artisan rises to new spheres of usefulness and to new dignity.

In earlier times, when the day-laborer was little better than a machine, with no freedom or amplitude, almost helpless and useless away from his crank, progress was well typified by a ruthless car, which, with most unequal and cruel pressure, ground to powder the unfortunates under its wheels, who had no elasticity, no power of escape.

When the new education shall have fully come, progress will be better represented by the ship of State, which rests gently and gracefully upon all, without inequality or oppression. Rigidity has given place to fluidity. The elements yield, and do not break. Thus, without friction or oppression, and hence without bitterness and strife, shall our progress be made. The sense of hardship and wrong will never come, and bloody riots will cease when workmen have such mechanical culture that the invention of a new tool, a grand labor-saving machine, only adds new power and dignity to their skillful hands.

Since writing this, I clipped an item from the *JOURNAL OF EDUCATION* which bears upon two or three of the points I have tried to make. They seem to have adopted in France what I will venture to call the plan of the American Manual Training School. I quote :

"On Thursday, May 3d, Jules Ferry assisted in laying the corner-stone of a school at Vierzon, whose object is the training of artisans. The doctrine now so strongly advocated by his party,—namely, that all social disturbance may find its corrective in education,—was fully expressed in his address. Caste, he said, would vanish when tools were found in schools alongside of maps and books ; the nobleness of manual labor would be perceived, and concord would spread. The principles common to all handicraft would be taught, so that boys would be able with full knowledge to choose their vocation. Such schools would tend to root out anarchist passions founded on ignorance, to elucidate social problems, to reconcile the masses to natural laws, and to prepare the Nation to meet foreign competition."

Such are some of the fruits of the new education when perfectly applied. We cannot expect it to spring full-armed from any one's head. It will be a matter of growth. We must see to it that we make few mistakes.

A word of warning comes to me at this late moment, that our results in St. Louis will be looked upon with suspicion, for the reason that our boys are picked boys, of more than average zeal and ability. I do not think the allegation is true. At first the boys were largely self-selected as fond of tools. As generally, however, they were supposed to be not fond of books. Later the boys have come for the breadth of training they are to get; for their health, because they wouldn't go anywhere else. I think them of about average ability.

You will observe that I have said nothing of the manual training girls should have. Girls should have manual training as well as boys, and half the arguments apply equally to both. We have no school which has attempted much in this direction that I know of, except Professor Adler's school in New York, of which Mr. Bamberger is principal. The subject is full of interest, but I have no time to dwell upon it.

Fellow-teachers, do not close your eyes to the truth because it shows that we have been in the wrong. Do not suppose that because our schools have done and are doing great and glorious work, they have not their short-comings. If they are to be improved, the changes are to be wrought by us. The schools are in our hands. Let us be frank and open-minded. Let us not sacrifice the ninety-nine who do not complete our elaborate course of study to the interests of the single one who does. Let us not sneer at the training which enables one the more readily to earn a good living in the world, and then lay great stress upon a training which only the children of those who have earned good livings can afford to take.

Let us lay aside superstition and a morbid devotion to what is dead and gone, and consecrate ourselves anew to the salvation of the present and the future. To draw a figure from George Eliot: "Do not suppose that the sun will go backward because you insist upon turning back the hands of your clock."

## THE FUNCTION OF THE NORMAL SCHOOL.

BY E. C. HEWETT, LL.D.

In this short paper I propose to touch upon a great many points pertaining to Normal Schools, but to discuss none of them extensively. I will rather raise questions and make assertions,—dogmatical, perhaps, but such as have grown out of my observation and experience,—leaving the settlement to others.

No one questions the necessity of schools, both to the rising generation and to the general well-being of society; and few comparatively, in this country at least, question the necessity and usefulness of our great systems of public schools, much as some are disposed to heap criticisms, wise and otherwise, upon them. But, in order to have schools worthy of the name, it is clear that we must have teachers fitted both by nature and by preparation to conduct them. The teachers, in a very true sense, make the schools just what they are, whether good or bad.

What, now, is a normal school? I reply, a school whose purpose it is to prepare candidates for the teacher's office, to enter upon their work. In my opinion, the question whether any given school is entitled to be called a normal school is to be determined by its aim or function rather than by any test applied to its methods or course of study. If its sole purpose is to prepare teachers for their work, if all its operations are carried forward to promote this purpose, it is a normal school. If its aim is other than this, or if the preparation of teachers is only one of several aims, it has no just right to be called a normal school. What rank it shall take among normal schools must be determined, of course, by the character and success of its operations; but these do not determine to what class it shall belong. What shall be admitted to its *curriculum*, how its operations shall be carried forward, what are the methods best adapted to accomplish its ends,—are questions about which normal-school workers will differ; but all should concede its claim to the title, if its work is directed solely to the end I have named.

In many discussions as to the proper work and methods of a normal school, there is one very common and very mischievous oversight. It seems to be taken for granted that there is, or ought to be, some one general pattern to which all normal schools should conform. We often forget that the circumstances of different normal

schools, and the material with which they have to work, vary greatly. A little thought ought to show that the pattern of a normal school best adapted to a city, where all its students have taken the same course of study and have graduated from the same, or similar, high schools, must be very different from the best pattern for a normal school whose students come from all the territory of a large State, with all the various peculiarities pertaining to hundreds of widely separated schools.

Again, the preparation that is best to fit persons\* to teach in the systematically graded schools of a city must differ very much from that required by persons who are to go out and take charge of schools in the rural districts. It is very plain to my mind that we need different *types* and different *grades* of normal schools. Given the material furnished to any normal school, the length of time for which its pupils can be held for study, and the kinds of schools that they will teach, and these *data* must determine the work of that school. No one school can be, or ought to be, the model for all others.

A normal school ought to do anything and everything which are necessary to fit the given candidates for their given fields. Many of the questions about so-called academic and professional work,—the kind and amount of each,—must be settled by conditions. Given conditions should be regarded, and the voice of experience should be heard. In this way, our normal schools have grown up,—the ideal has been modified by experience; and so, I think, they must continue, to a great extent, in order to give the best results. It is very easy to particularize points in which our normal schools have not conformed to some theory, or some ideal; it may be freely admitted that many mistakes have been made, and much crude work has been done; but, after all, the history of these schools in America is very remarkable, and it is one of which their friends need not be ashamed.

The first State normal school on this side of the Atlantic began in 1839, in the historic town of Lexington, Mass. It was undertaken as an experiment, and in the face of many difficulties and much opposition. Opposition and criticism have continued till to-day; but, in spite of all, our normal schools have constantly grown, in number, in efficiency, and in the good opinion of the people. Conclusive evidence of the truth of the last statement is found in the fact that so many schools which have no just claim to it are ready to take the name of *normal*. In the early days of these schools it was not so,—the name had no money-value,—it was not worth stealing; and those who were fairly entitled to it might well regard it a matter of sound financial policy to say nothing about it.



Note, again, that, at the same time that normal schools have been multiplying and growing in popular favor, the whole general subject of education has moved forward to a place in public estimation which it never held before. Are these facts merely coincident? or is there the relation of cause and effect between them? I submit the question confidently to any one competent to judge. The normal school, in some form, has come to be regarded as an essential part of the public-school system; and this is as it ought to be. These schools bear a relation to the life of the community altogether different from that of any other professional schools. The line of argument is this: The education of the young is an interest so vital to the well-being of society that the State must attend to it as a matter of self-preservation; properly prepared teachers are essential to any system of education; experience in this country, and in others, shows that such teachers are not forthcoming in sufficient numbers unless the State make provision for their preparation. Hence, State or municipal normal schools are just as truly and just as legitimately a part of the public-school system as any other part.

There is another reason why the State should render such schools independent of popular patronage for their support. The proper work of a normal school must insist upon such a regard for the elements of instruction, — such a patient and continued labor in the fundamentals, — as no school dependent upon popular patronage for support can afford to insist upon, at least in the present state of opinion on this subject. That school that makes a great show in the *ologies*, the *osophies*, and the *onomies* is the one to which the dollars of the multitude are likely to flow in the fullest current; but it need not be said in this presence that a top-heavy school of this kind is not the one best fitted to prepare our teachers. Only a school in some degree independent of present popular favor can afford to do the work that needs to be done.

Nor must the normal school, supported at public cost, be regarded as in any sense a public charity; it is as far removed from this position as the public school itself, and for the same reason. The State supports the public school for its own good; it should support the normal school because it is essential to the highest success of the public schools. In other words, the normal school demands public support as a measure of public economy. The State is spending millions for its public schools. Their one aim is to educate the people for the good of the State. Their efficiency depends upon their teachers. If these are utterly worthless, the whole investment is lost. Just in the ratio that the teachers are made efficient, in that same ratio the investment is secured. To make the teachers thus

efficient, normal schools are established and supported. If, by the normal schools of a State or city, the teaching is improved ten *per cent.*, then the normal school is worth to the public one-tenth of the total amount expended for its public schools. This is the argument for normal schools at public cost; this is the sole reason why the existence of such schools should be demanded. Any benefits that they may confer on individuals are purely incidental.

Reviewing now, briefly, the points on which I have touched, I assert:

1. That good teachers are the great want of our schools,—nor is there likely to be a change in this respect;

2. That any school whose sole purpose is the fitting of teachers for their work is a normal school, and it is proper to confine the name to such only:

3. That, owing to circumstances, no one pattern of a normal school can be best for all,—that such schools ought to be of different types and different grades;

4. That the history of normal schools in this country has fully demonstrated both their necessity and their worth; and that it is fair to claim for them much of the credit for advance in education;

5. That normal schools should be supported at the common charge, because otherwise they will not be founded in sufficient numbers, and because they need to do a work which schools dependent for support upon popular patronage cannot do;

6. That such schools are, in no sense, public charities, but that the public should support them for its own sake, as a wise measure of economy.

Now, turning to the *work* of the normal school, a few words. From what has been said, it will not be expected that I shall try to set forth the kind of work, nor the amount, nor the methods, to which all normal schools should conform. And yet I think there are some fundamental matters in which all normal schools should agree. It has been well said that three kinds of knowledge are essential to one who would teach well: 1st, He should know the nature of the being to be taught; 2d, He should clearly understand the knowledge, the facts, or the subject-matter, to be presented to that being; 3d, He should know the method of bringing knowledge and being together, and the best modes of doing this work. In my opinion no normal school can afford to ignore any one of these three fields of knowledge.

If there is anything that especially marks the drift of recent educational thought more than anything else, it is the study of human nature, particularly in the child. We hear much now-a-days of the

"new" education ; but, as I understand it, there is nothing new about it except in the endeavor to become better acquainted with the child's nature and wants, and to have a wise regard for the same in his education. So far as possible, all normal schools should give their pupils a knowledge on these points as full and complete as may be,—nor should they be content to teach what is already known merely, but they should do much to increase the common stock of this kind of knowledge, and to put it in form for practical use.

Mental science, in its relation to pedagogy, must receive more attention than it does at present ; but, of course, the knowledge of human nature of which I speak includes much more than mental science in any form. Nor do I believe that it will do to say, as some do, that the acquisition of the knowledge to be taught is wholly foreign to the *idea* of the normal school. I am not much frightened at the cry of "academic" instruction. Whatever may be our theories on this matter, it is certain that, as things now are, the acquisition of the knowledge to be taught must occupy much attention in our normal schools, if we would give the pupils who come to us what they most need. But, more than this, I believe that the subjects to be taught must be reviewed at least, and looked at in a new light by the candidate for the teacher's chair before his knowledge of them is in the most available form for imparting it to learners. I have not time to discuss the question now, — if it were necessary or proper to do so, — but I believe that this work of putting the knowledge of the school-studies into the proper form for the schoolmaster's use is as truly "professional" as any work that he can do. I doubt not that the study of the subjects monopolizes too large a share of the time in many of our normal schools ; but, so far as I can learn, the best normal schools in Europe do not proceed upon the plan, sometimes advocated here, that the normal school should demand that all the *matter* of instruction shall be acquired elsewhere.

Of course, no one will dispute that the study of the method and modes of bringing the knowledge to be taught into the most healthful and fruitful relations to the mind of the learner should make up a large part of the work of the normal school. Nor will any thoughtful man deny that the wisest and most careful work needs to be done in the earliest stages. Men in other departments of life fully appreciate the importance of good foundations. It is strange that we are so slow to see the application of the same principle in the work of education.

Once more I say that it seems to me idle to attempt, or to desire, to make this common work of all normal schools take on one type or one form, as the best of all possible types or forms. And yet I think

it very desirable that we should come to a uniform recognition of the underlying truths and principles involved in the work. In other words, we need to formulate for our own use, and to give to the world a "body of educational doctrine," or a "schoolmaster's creed," in regard to the fundamentals. If I mistake not, we are making good progress in this respect, but the work is, by no means, done yet; and it is the especial business of workers in normal schools to carry it forward to its completion.

Finally, let me say that the work of any school is very defective, as it seems to me, if it stops with the mere gathering and imparting of facts, of ideas, of knowledge, in these several departments of its work. It is the business of the teacher *to do*. There is but one sure way of gaining the power to do, — that is, by doing. Hence, training, practice, should be found in all the stages of the work of a normal school. In respect to the *work* of the normal schools, then, I assert:

1. That they should make their pupils acquainted with human nature,—in its capacities, tendencies, wants, and limitations, especially as these appear in the life of the child;

2. That the subject-matter of instruction should receive attention to any extent that may be necessary; and that I believe that the *ideal* normal school will not omit it altogether;

3. That the study of method and modes ought to make up a large part of the work of these schools;

4. That, while it would be foolish to attempt uniformity in detail, it is desirable that there be uniformity in adherence to underlying principles, and that a body of educational doctrine should be formulated and disseminated;

5. That the work of training, or practice, should have a prominent place in all our normal schools;

6. And, in addition to what has been said already, that every normal school should awaken in its pupils a genuine enthusiasm respecting the work of teaching, and a true professional feeling, or *esprit de corps*.

Are these assertions of mine true or false? Are there other things equally fundamental which I have overlooked?

How shall we best settle these questions, and others that may arise?

When we clearly see what we want to work out in our schools, how shall we arrive at better modes of working?

How shall we bring the truth that we know before the people so as to do them the most good, and to move them to give us the most assistance in our efforts to bless the coming generations?

*WHAT HAS BEEN DONE FOR EDUCATION BY THE  
GOVERNMENT OF THE UNITED STATES;*

OR,  
OUR NATIONAL GOVERNMENT THE FRIEND OF THE VIRTUE AND  
INTELLIGENCE OF THE PEOPLE.

BY HON. JOHN EATON, LL.D.

The chaos of darkness began to give place to order when God said, "Let there be light." Whether or not this command became a law for all future events, it appears clear that all great forward movements of mankind have been inaugurated by some measure of obedience to its purpose. The establishment of a free government by the fathers of American liberty was no exception. Out of a decent respect for the opinions of mankind, they declared to all the world the causes that impelled them to the separation. The principle thus illustrated, though sometimes obscured, has been followed by the Government of the United States to our day; and may we not add, because of this we still exist as a free people? Our government of liberty, by the people and for the people, is believed to be one of reason and conscience, and it is held that it will have the support of the hearts of mankind when it receives the approval of their judgment. Resting on the intelligent and virtuous choice of its own citizens, this government proceeds upon the idea that it is concerned in their virtue and intelligence, that it must take the people into its confidence, and that they must know it and understand it to perpetuate it. To many the General Government is so remote, so far away, so indefinite, that they think of it only as naturalizing foreigners or making treaties or conducting wars, collecting our customs, distributing the mail, and having a President and Congress. Even the instruction in our schools concerning the Constitution of the United States is too often devoid of any adequate or clear specification of its manifold responsibilities or of its many blessings.

The teachers and educators of the country should know how to avail themselves of all forces at their command to aid themselves in making sure the intelligence and virtue of the people, and thus assure also the great good committed to this Government for this and other lands, for this and all coming generations. In considering what has been done by the Government of the United States for education, and more from convenience than from scientific accu-

racy, I choose to speak first and mainly of what the National Government has done indirectly for education, and secondly and briefly of what it has done directly.

I invite attention to the indirect influence of Congress, the law-making power. Every man taking the oath of civil office is bound by supreme allegiance to the constitution and laws of the United States. Thus through all the land is not only taught the supremacy of the laws of Congress, but the solemnity and binding character of the oath are emphasized by the great moral weight of the Nation. The Senate, so far as it participates in what may be called executive administration, acts in secret session; otherwise Congress does its work with open doors, nor does it deliberate without records, nor does it trust the recording of what it does to other agencies. The account of its doings, its daily journals, and the *verbatim* reports of its proceedings are available to tell the people in the remotest corner what their representatives are doing, and every well-conducted debate is a source of enlightenment to the people. The great number of bills on a vast variety of subjects offered each session, which some attempt to ridicule, illustrates the immeasurable number of public interests demanding consideration by its members, and is fitted to convey an idea of the importance of congressional position, and in time to create a demand among the people for the highest order of character, fitness, and attainments. The work of its numerous committees often taxes experts in science to their utmost. The direct distribution of documents by members is enormous and has a vast informing power, however many may be wasted. Two sets of congressional publications are given by law to libraries in each congressional district, to be indicated at the discretion of the member; thus there is placed in every part of the land, even in far-off Territories, a record of the course of public affairs, for the examination of inquirers. Under Congress, too, there is a great library containing 480,000 books and 160,000 pamphlets for its own use and that of those within reach of the Capitol who desire its aid. The neglect to provide a proper building for this great source of instruction to the country, points at once to its greater possibilities and to defects in congressional action. Here the librarian administers the copyright law, so stimulating to literature and encouraging to authorship, according to which 12,297 books alone were entered last year. Even for artistic works, which the ordinary visitor to the Capitol passes by with a hasty glance or a disdainful weariness, the national Congress has expended considerable sums of money. Now and then there may have been reason to complain of haste, of ignorance, of partial-

ity; but the intention of the Government has been almost always good. The paintings, statues, and busts which adorn the Federal City's public buildings and squares have cost more than \$900,000. Powers, Greenough, Crawford, Rogers, Brown, Launt Thompson, Healy, Trumbull, Moran, and other great names are represented in this array of plastic and pictorial beauty, wherein the sages and heroes of the republic are preserved to us, though their bodies are dust, so that their outward appearance may fortify the lessons of their wisdom and valor.

But this is not all. The public buildings of Washington are large and magnificent; the architect of the Capitol and the architect of the Treasury may well feel proud of the stately piles that, while they shine in the free sunlight, testify to the wealth and grandeur of the nation. But the public buildings in Washington are a mere drop in the bucket, compared to the numerous and noble structures scattered over the country, already erected or now building. The United States court-houses and post-offices in almost every large town and the custom-houses and marine-hospitals in every port are solid witnesses of the care, taste, and attention expended for the suitable and orderly conduct of federal business. How much these buildings have done to improve and chasten the public taste, to create a desire for beautiful and durable private and corporate architecture, can hardly be imagined.

The close connection into which Congress is brought in making laws with the veto power of the President and the decision of the courts illustrates before all minds the greatly needed principle, of universal application in human affairs, of self-limitation and self-restriction within properly defined limits. You will recall the extent to which the House of Representatives has sometimes been carried in the heat of excitement, in the assertion of what were its rights as against those of the private citizen; but when a case involving this question was brought before the Supreme Court of the United States, the constitutional line was laid down and clearly enunciated, and when next a proposition of this kind was made, infringing the rights of the citizen, a reference to this decision was enough to arrest action and point out the folly and wrong proposed. It would be impossible to tell how much all our ideas and habits of justice are affected by the decisions of this court, as they are enforced through the circuit and district courts of the United States system and the administration of the Dept. of Justice. How speedily would their mal-administration corrupt the very fountains of justice throughout the land! In many causes the State courts are final, and many of them are pre-

eminent in their judicial character ; and yet it is not too much to say that the United States courts affect the administration of justice through all grades of courts, down to that of the lowest magistrate. No one can study our Supreme Court without a feeling of profound admiration for its high character and of gratitude for its wisdom and justice, even though occasionally it may commit the error of giving an extra-judicial opinion. What a mass of legal literature is coming from these courts for the information of the bar, the law schools, the public press, and the people !

The President, chosen directly by the people in their action by States, is in a peculiar sense to them the embodiment of the national idea. They desire to see him, to speak to him, to shake his hand ; and in spite of the laugh that some would raise at the expense of this widespread feeling, there is in it a solid good, closely connected with the most self sacrificing and heroic patriotism. The people,—yes, the common people, as some are fond of saying,—understand the purpose of those who would shut the President within the walls of the White House and never permit him to go abroad among them. They desire his visits to their States, their cities, their vocations ; they want to feel the inspiration to patriotism and nationality awakened by him as by no other presence. Thus, when the President speaks, when his messages are sent to Congress, the intelligent of all classes want to read what he says, and those newspapers that may entertain the most bitter feeling toward him are in a sense compelled to give his words, even though it be in a garbled form. Study the difference between his communications and those of the head of any other form of government, and you get at the very essence of the excellence of our free institutions. Take, for instance, the President's messages and accompanying reports from the several cabinet officers at the beginning of Congress ; how full they are of facts, of light upon the course of our public affairs, compared with the ex-cathedra, dictatorial utterances of a king or queen or emperor or czar ! The people feel that his messages, though addressed to their representatives and senators in Congress assembled, are really addressed to themselves, who are the power behind all other powers in our form of government.

Through the State Department is carried on that portion of the administration under the President which is directly connected with the United States Ministers in foreign countries, and the representatives of those countries accredited to the United States ; also the correspondence between the President and the several States. It has the custody of the great seal of the United States, which is affixed to various public documents. Here are preserved the treaties and laws



of the United States. Here all applications for passports are made. Through this Department the American people are expected to know officially the rest of the world. It has an invaluable collection of portraits of eminent public men, a diplomatic library of great value, and is charged with the custody of some of our most important archives. Here is a large collection of the papers and letters of George Washington, including that remarkable diary of his boyhood, the whole costing \$45,000; here are the papers of Jefferson and Franklin, and of others hardly less valuable, but impossible to enumerate. As early as 1818 this Department was authorized to purchase for distribution, at a cost of \$5,600, Seybert and Pitkin's Statistical Annals and Commercial Statistics. Dr. Seybert says in his preface that at that date the documents annually presented to Congress are contained in more than 120 volumes, and are too much diffused to be made the subject of immediate reference. Through this Department, too, the country was put in possession of copies of the journals of the Federal Constitutional Convention and of the secret journals of the old Congress, and, at a cost of over a quarter of a million dollars, the documentary history of the Revolution. Not alone the private wealth of Astor, but the State Department, aided in the production of *Audubon's Birds of America*, that pride and glory of American naturalists. It has often been wondered why the first great World's Fair, held in London in 1851, produced so slight an effect upon the United States. The reason becomes obvious when it is known that the State Department was not authorized to participate. On the other hand, our new and enterprising affairs received such an impetus from the exhibitions in Paris in 1867, Vienna in 1873, and Paris in 1878, because the State Department was authorized to take charge of American exhibits, to employ experts to examine and report their lessons and to print the same, the whole at a cost of from \$160,000 to \$200,000 for each exhibit. Well-informed Americans glory in that great work, *Wheaton's International Law*, but it is doubtful whether its publication would have been possible had not the Government aided it through this Department. Through it also our people had the benefit of the London International Statistical Congress in 1860, and of the similar Congress in St. Petersburg in 1872, the published reports of which, in the possession of our libraries, have done so much to shape our progress in statistics the last twenty years. Were it not for this same agency, also, that able educator, that preëminent student of penology, that ardent and successful reformer of prison affairs throughout the world, Rev. E. C. Wines, D.D., LL.D., would not to the credit of American philanthropy

have led the organization of International Prison Congresses held at London and Stockholm, nor could he by his publications, moreover, save as made at public expense, have shed the light of those great gatherings upon every prison administration in every State and county in the Union. From the same source we have also, in addition to its valuable reports, a series of bulletins containing the reports of our consuls from all portions of the world, so valuable that they are sought in every center of commerce and learning.

How many think of the Treasury Dept. only as a great, strong box, which receives and holds the nation's treasure, and from which is paid out the money for the carrying on of the Government. Here, too, the great informing principle is applied. The methods of accounting, devised in the main by Hamilton, are undoubtedly not excelled in their fitness to show clearly every transaction, either to give proof of honesty or to expose dishonesty. Many jokes and anathemas are thrown at what is called its red-tape; but when there is just complaint that its methods are offensive, it may be well to inquire whether a spirit of officialism, so hateful in itself and justly so offensive to the American people, has not taken possession of some clerk or officer instead of there being any fault in the system itself. A computation has been made by experts of the losses in handling public moneys of the United States from June 30th, 1861, to July 1st, 1879. The amount handled in this period, including receipts and expenditures, reached the enormous sum of \$31,500,000,000, and the losses, though there were five years of war during the period, reached only forty-six cents in a thousand dollars.

What financial administration of the States or cities, or of our banks or other great commercial affairs, can compare with the administration of these vast funds in security and absence of loss? Hence it is only fair to say that here is taught by example, as nowhere else, the administration with scrupulous fidelity of public and private trusts. Introduce corruption here, and how soon it would spread through all our affairs, and public and private confidence would take flight. It should be observed that, while the accounts of all forms of service are settled in the Treasury, this honesty and preciseness must necessarily be shared by every officer charged with the responsibilities of expenditure; and while I speak of it in connection with the Treasury where the records are kept, I would point with emphasis to the fact that it is equally characteristic of the service where these records are made. Here the national banking system is administered,—so admirable that no one need ever lose a dollar of issue, and so instructive of honesty compared with the "wild-cat" systems,

long prevalent in different parts of the country. Here, too, coinage is managed. The memory of mankind cannot recall the date when the educating power of coins was not understood, and the chief evidence we have of certain rulers and epochs is to be found on their coins. How did the emperor of France familiarize the eyes of the world with himself by the napoleons which he made popular as a coin, even where he was despised! Who shall say how much of national and patriotic sentiment is taught by our money, either in paper or coin, bearing the national impress? Yet we cannot fail to lament that we should ever have fallen into error as to the relation of paper to coin, or of silver and gold to each other. But along with the use of coin comes the most effective service for the detection and punishment of counterfeiting in all its forms, operating freely without reference to boundaries or peculiarity of State laws, punishing the most notorious criminals, thus aiding in teaching the perils of crime and in protecting all communities against its depredations. Here also is the record of all securities outstanding against the United States, upon the accuracy and fidelity of which their value depends, whether in the hands of orphans and widows or banks.

In the Treasury, also, is administered the light-house system that dots our coasts with those lights and other signals that warn those who go down into the sea in ships against the perils of death that would otherwise await them. Here, too, is the Life-saving Service that has its stations upon all our shores specially perilous to navigators, and where, by the skill of science and art and by heroic endeavor, so many lives are saved from watery graves. Here, too, is the Marine Hospital system, by which a hospital for sick sailors of every nation is provided at every one of our considerable ports, whether on gulf or ocean or lake or river. In this Department are supervised all the public buildings erected in the different States by the United States. Here, too, is found the National Board of Health that has taught us how the whole people may be protected from the terrible plague of yellow fever; how much security there is in a formal, careful, and correlated system of quarantine in all our ports; how all epidemic and contagious diseases can be staid by a hand that stretches over the whole land and brings into coöperation all other agencies of State or city. Here, too, is operated the Customs Marine Service, with its force of officers and men and a great school of navigation with its fleet of vessels.

We must not omit the Coast Survey, recommended by Jefferson and Gallatin, which has been made immortal by Hassler, Bache, Pierce, Patterson, and Hilgard. Here are kept the standards which deter-

mine the weights and measures used throughout the country. Here exact mathematics and cartography find inspiration. By the nicest processes and instruments of precision, our coasts and harbors are surveyed and mapped. In the reports of the office nearly 200 articles have appeared on subjects pertaining to geodesy; about 130 on tides, currents, and winds; 60 on terrestrial magnetism; and a long list on the Gulf Stream, deep-sea soundings, the measurement of heights, surveying, astronomy, and miscellaneous subjects. It has issued some invaluable volumes of the *Coast Pilot*, and has in course of preparation a magnetic map of North America and a general map of the United States, compiled from the precise data acquired from its surveys.

But what can we find in the way of contribution to education, either direct or indirect, in the War or Navy Department? The horrors of war no one has yet adequately described. The spirit of war and of a standing army or large navy on a war footing is hostile to the fundamental ideas of our liberty; but a nation conducted in the spirit of non-resistance could find little chance for standing among other nations of the earth, even in this the nineteenth century of Christian progress. The theory of our Government appears to be that the army and navy shall be the least possible, consistent with the protection of our frontier and of our commerce, the suppression of sudden violence, and the supply of officers, should the emergency of war arise.

Through these Departments all the improvements are kept under observation in the conduct and organization of armies and navies throughout the world. Through them also these ideas are disseminated for the benefit of the militia in all the States and for the preparation of merchant-marine. In the purchase of their supplies, great systems of tests are maintained by which the qualities of food, clothing, and medicines are determined. The Commissary Department of the Army publishes a cookery-book for the use of the camps. In the Quartermaster's Department the veterinary surgeon may get some of his best information. The Corps of Engineers is busy with questions of fortifications, torpedoes, bridges, surveys. In it is the science which directs the improvements of our rivers and harbors and lays out our military roads. The Ordnance Corps is busy with questions that apply to all munitions of war, and lays under contribution the most advanced attainments of science touching all its affairs.

The army furnishes a trained officer for instruction in military tactics in many of our colleges. The Surgeon General's office has placed, not Americans only, but all nations, under obligations for its

efforts in behalf of surgery, anatomy, hygiene, and all departments of medicine and sanitation, and the introduction of humane appliances for the relief of the horrors of war.

Take the publications of the War Department. People suppose usually that these comprise the annual reports of the Secretary, the commanding general, and the heads of the staff corps, and that the information given is necessary, but very meagre and very dry. Now nothing in the world can be further from the truth than any one or all of these suppositions. The annual report of the War Department of late years fills from three to five octavo volumes. Besides the general account of the condition and movements of the army during the year, and in addition to the ordinary statistics about the cost and quantity of subsistence stores, means of transportation, medical supplies, and similar topics, it comprehends an account of all the great engineering works under the charge of engineer officers; it contains a yearly study and careful analysis of the weather by the Signal Office, and wise hints as to the kinds and causes of disease in every camp from the Rio Grande to Maine. But the annual report is not the only publication of the War Department. The Secretary has for years been acquiring, classifying, and printing materials for the history of our great war, written by men who were eye-witnesses and participants in the incidents they relate. The Surgeon-General's Office has published several superb quarto volumes of the medical and surgical history of that war, and three or four large octavo volumes of the subject catalogue to the matchless medical library of that office. The other scientific corps of the army are methodically producing treatise after treatise and report after report. Think of Rodman's labors in the Ordnance Bureau, of Comstock's survey on the northern lakes, of King's and Wheeler's surveys in the great West! The Signal Office publishes a daily weather map, containing a short account of the weather for the last twenty-four hours, a delineation of its actual condition as to humidity, temperature, and wind, for the whole Union, and a prognostic of its probable character for the coming day. It is hard to say how many billions of agricultural and marine property this weather map has saved in the last fifteen years. What we can say is that almost every who sees its friendly green expanse at his post-office every morning governs his proceedings by its advice; ships sail or keep safe in port, crops fall before the reaper or stand untouched, according to the encouragement or warning of the War Department weather map.

Examine for a moment what the Nation has done for science in connection with the Navy Department. The *Nautical Almanac* has

appeared for every year since 1855, costing from the beginning of the work in 1849 to 1876 more than \$557,000. The study of meteorology, or the rules and incidents of weather-changes, was prosecuted between 1848 and 1860 at a total expense of about \$24,000. Astronomy has been sedulously fostered since 1844 by the foundation and support of the Naval Observatory at Washington, which has been adorned by the labors of Matthew F. Maury on the study of the Gulf Stream; of J. M. Gilliss, in connection with the astronomical expedition to Chili; of Simon Newcomb, in the late transit of Venus; of Asaph Hall, in the discovery of the satellites attending Mars; and by the equally useful, though less known, labors of others. Here is the finest astronomical library in all America, numbering 6,000 books; here, too, is the great equatorial telescope, twenty-six inches in diameter, for which, with its tower, dome, and other appliances, the Government paid more than \$65,000. Education of naval officers and engineers cost the Government, between 1848 and 1876, \$3,248,000, and the grounds and buildings at Annapolis used for this purpose cost \$97,000 more. Geography is enormously indebted to the many ocean and inland explorations conducted by officers of the Navy. Remember how Charles Wilkes, between 1838 and 1842, discovered the Antarctic continent and many islands in the South Seas; how Ringgold and Rodgers, between 1852 and 1855, explored the Pacific from Van Dieman's Land to the Aleutian Islands; how Lynch penetrated the rivers of West Africa, and explored the Dead Sea and the Jordan; how Herndon and Gibbon explored the Amazon in 1851 and 1852; how Surgeon Kane pierced the icy solitudes of the Arctic seas in 1854; and how Commodore M. C. Perry, about the same time, unlocked the mysteries of Japan for the modern world. From the collections made by these fearless explorers the National Library of Congress, the National Museum directed by the Smithsonian Institution, the botanical gardens of the country and the world, commerce, art, and science generally have received an immense impulse. Nor should the labors of Dr. Charles F. Hall of the "Polaris," and Lieut.-Commander De Long in the "Jeannette"; of Ammen, Shufeldt, and others, on the Isthmus, be forgotten. Naval officers have charge of the four training-ships that are doing so much for the improvement of the mercantile and naval service by forming a superior class of sailors. Naval officers are on duty in the Light-house Service, the Coast Survey, the Smithsonian Institution, the National Museum, and the Fish Commission. Officers of the American Navy have helped to reorganize the navies of Germany, Egypt, China, and Japan. In several colleges, naval officers are detailed to give in-

struction in marine engineering. Besides the annual reports to Congress, the Navy and its bureaus have prepared and issued more than five hundred professional volumes and pamphlets, embracing all the general subjects heretofore mentioned, and treating numerous topics of the greatest scientific interest in the most comprehensive way.

General Grant, when President, was fond of calling attention to the educating influence of the postal service. No teacher fails to tell his pupils of the advantages of letter-writing, and the post-office makes these benefits possible and multiplies them. How has this service responded to the improvements of the period in facilities and cheapness? The letter that required twenty-five cents for transmission a few years ago, if sent several hundred miles, now costs two cents, and will soon require but one cent to any part of the land. The rapidity of transit keeps pace with the improvements in travel. Go where you will in United States territory where citizens live and do business, and there is the mail of the United States. On postal trains, assorted as they fly; in cities, protected in chariots or placed by careful carriers in the very hand of the one addressed; again, in pioneer regions, it travels in coaches or on the backs of mules or packmen,—thus reaching every hamlet, thus penetrating every center, however great and populous, and every region, however remote and solitary, if inhabited by an American citizen. This universal presence of the United States mail, meeting the traveler on every train, or steamboat, or stage, and at every station, gives one something of the impression of the ubiquitousness of Providence,—carrying messages of business, of love or sorrow, of pleasure or pain, together with the newspapers and books, or other forms of the printed page in packages, in a single year numbering in the neighborhood of two billions and a half.

The Interior Department, one of the last cabinet offices established, as might be expected, has manifold methods of contributing to the education of the people. Here is the Land Office, where are held securely the records of the titles to the lands in the newer States. The difference between the titles thus derived and those obtained by old colonial and other methods, is too well-known to need description. By this office the great precept is enforced, "Remove not the old land-marks," which has so much to do with the value of property and the peace of communities. This office, by its system of surveying the public domain, has furnished a vast amount of information, has guided immigration and settlement, and by its system of maps been a great instructor in the geography of our country, for our own people and those of other lands. The Pension Office illustrates the

regard by our Government for those who rendered it faithful and efficient service in war. The hundred millions appropriated annually at the present time for pensions, show, at least that republics are not ungrateful. The Patent Office may be said to lead the world in the excellence of its methods and its power of stimulating invention of new devices, useful to mankind. Here are stored the models and the drawings and specifications of the patents granted from the early times,—how instructive to the hundreds of thousands of annual visitors! Here is the first invention that led the way to the great profit in cotton raising, and those that mark improvements in the manufacture of fabrics of wool or cotton, and machines of iron and steel and wood. What stories they tell of the human brain! What way-marks are they of human progress! From this office is issued also weekly a bulletin of patents granted, illustrated with drawings and fully described in the text, which are systematically distributed through all the congressional districts. For its own technical use and that of those seeking similar information, it has a library of over 40,000 volumes relating to science and its applications.

Here also is the administration of Indian affairs, in which there has always been a quasi acknowledgment of the advantage of educating Indian children, but by the indirectness of the methods adopted and the general indifference to the subject till within a recent period, the large sums expended are no indication of the meagre results secured. But since the whole policy was changed by General Grant, there has been a steady advance in the care with which all expenditures for Indians have been made, and a larger proportion of them have been devoted to education. Under Mr. Schurz a notable step, led by Captain Pratt, was taken in the direction of industrial education, at Hampton, Va., Carlisle Barracks, Penn., and Forest Grove, Or. The present Secretary, Hon. Henry M. Teller, in connection with the Commissioner of Indian Affairs, has endeavored to turn the great Indian expenditures almost wholly in the direction of education, declaring that if all the Indian children for a few generations could be educated, not merely in books, but industrially, in matters of conduct and behavior, and prepared for the discharge of the daily duties in life, our Indian difficulties would pass away and Indian wars cease forever. How much these efforts for the industrial education of the Indian have done to inform educators and the public generally of what is possible in this department of instruction, is beyond my power to tell. These experiments shed a flood of light upon what could be done for the education of the children of the colored people, now almost wholly neglected on the remote plantations.



Through this Department, it should be observed, the General Government keeps up its connection and discharges its responsibilities with reference to the territories. Here the reports touching all the features of their administration, including education, are received and published.

In this Department, also, is the administration of the great Geological Surveys that are employing such a large number of scientists, and doing such a magnificent work, both in the States and territories of the country, out of which comes such a vast amount of material, instructive to the people of the land in topography, geography, mineralogy, climatology, and various other departments of science that so closely connect themselves with every-day life. Their reports, full of scientific observations and information, most carefully compiled and illustrated, are an acquisition for any library.

The census, which was at first in the State, is now in the Interior Department.

Having their connection with the Government, through this Department, are various interesting institutions in the District of Columbia,— the Washington Asylum, the jail, the Reform School for Boys, and the Hospital for Freedmen, from which the Medical Department of Howard University derives such important clinical advantages. Through this Department, also, the National Deaf Mute College has its connection with the Government, and receives its annual appropriation of fifty thousand dollars, which entitles each congressional district to the education of its representative deaf mute after he has been sufficiently taught in his State institution. This college,— let it be said to the honor of its founders, and to the honor of Congress,— is the first institution in the world to furnish this grade of instruction to that class of unfortunates who must live apart in their own world of silence shut out from communication with their fellow-men through that marvelous medium, the human voice.

In this Department the Bureau of Education has its official home. Thus, without any special transition, I come to speak of what the Government has done directly for education ; and if space permitted, it would be interesting to return to many offices already mentioned, and trace the instruction that goes out from them directly for the benefit of the people. At each library of Department or Bureau we should need pause to describe the cataloguing and indexing, and the manifold uses of their books by scholars and experts. The extent to which the authors of books and writers for newspapers and magazines are indebted to these Government sources of information is the more difficult to trace, because so generally Government works are

considered common property and no acknowledgment is made. Moreover these works, however valuable, are often omitted from indexes of subjects and are altogether without paid advertisement.

Thus it appears how far the organization and action of the General Government are removed from those of a paternal government on the one hand, and how on the other hand they differ from that of a mere sheriffalty (shrievalty). From these brief statements we cannot fail to see that its quickening influence has been felt in every department of thought and action, and yet where has it dwarfed or paralyzed or diseased the action of private individuals? Where have its efforts been other than healthful and stimulating, and may I need add, useful? For if these great informing characteristics of the Government should be blotted out, affairs might drift on under the impulse already created, but how speedily their lack would be recognized and their absence deplored! How keenly would be felt the impossibility of continuing our Government for and by the people, our institutions of liberty, our varied vocations, our science, art, literature, and life! But it is already apparent that in connection with the indirect informing influences that flow from the current administration of national affairs, there is also a vast amount of activity that is preëminently for the purpose of informing the people. Every library already enumerated is in itself a direct educational agency. All the publications of the Government Printing Office are for the information of the people.

More closely connected with the Interior than any other department is the immense establishment in which the Government printing and binding are done. It has grown from its small beginnings, in 1852, until it now ranks in the extent and value of its equipment and the number of its employés among the leading offices in the world. The varied character of the publications of the Government would overtax the resources of any establishment not of the very first class. Intricate mathematical work has to be done for various offices; rare types must be obtained for monographs which the Government publishes in regard to Indian languages; and treaties and foreign correspondence are placed at the disposal of the State Department in accurate form and in the original tongue. But the office is also called upon to execute with the utmost dispatch, and with the highest attainable accuracy, the great volumes of work called for by Congress and the several Departments. In 1881 the printing-office prepared over half a million (502,801) pages of types for books, which were printed to the number of nearly eight and a half millions (8,466,333). This is entirely exclusive of blanks, blank books, etc.,

and of the Congressional Record. You will be in a condition to estimate the celerity with which this work is performed when I tell you that a book of 1,400 pages was begun and finished within three days. Again, in the recent Star Route trial, the record of a day's proceedings amounted to 434 printed pages. The copy was received about six in the evening, and the completed book was in the hands of the judge at ten o'clock the following morning. Possibly the office may not equal the printing-house of Austria in the polyglot character of its publications, or that of France in historical interest; but it is clearly one of the best equipped printing-offices in the world, and a monument of that practical sagacity in administering affairs which has placed the United States in the fore front of the civilized nations of the globe.

There are those who object to all this expenditure in printing as so much waste,—as a business that does not belong to the Government. They would have all the printing done by private parties, and all the books sold as they are under monarchical and other forms of government; but the effort to have the work done by private parties was long tried in many ways, and the present method has been found far superior in economy, uniformity, and efficiency. Doubtless there could be improvement in the ratio of distribution for different documents, but it must be remembered that ours is in no sense a paternal government; our officers are not over the people as parents; they are the servants of the people, expected to render an account for their stewardship; and the day has not arrived when an American citizen is ready to pay either the officer or a third party for the report of the service the officer has rendered. By the present method of publication at the expense of the Government, making all Government works freely accessible to the citizen, there comes the publicity that is so great a safeguard in the workings of our institutions or of any representative government. Woe betide the day when the people become indifferent to what their representatives say or their executive officers do!

Now look at the decennial census that the Nation takes under the Constitution. Once it was a bare enumeration of the population and of the males capable of bearing arms. Now it is the periodical ascertainment of every material and moral force possessed by the Republic that can be expressed in numerals. It forms a vast storehouse of facts respecting every class of the community, every kind of industry, every sort of property, every condition of intelligence, from which the philosopher, the historian, the legislator, and the economist can draw needful information for the prosecution of their public and

private labors. It is no longer a summing up of human hordes and the raw material of war ; it is the wise survey of our own affairs for our own good and the information of posterity.

Nor is the work of the Bureau of Statistics, in the Treasury Department less useful in its way. Here the tonnage of our vessels, the traffic of our commerce, foreign and domestic, the immigration to our shores, and similar subjects are carefully studied and reported. It would indeed be well if every great executive department of the National Government had some such office in it for the consideration of the subjects of which it has charge.

The Bureau of Education, in publishing its reports, circulars, and bulletins, is only following the example set by the other Departments and Bureaus of the Government. It differs from some in distributing these publications more widely, and from others in distributing them systematically. But the principle of informing the public as to what is being done is the same here as elsewhere, excepting that with respect to education it is simply an office for collecting and disseminating information. To add to its efficiency it has a museum, filling one story of its building, containing illustrations of educational conditions and appliances. It has also a library of 14,000 books and 35,000 pamphlets ; an author and subject-catalogue of the library is in course of preparation by which every book and article treating educational progress or methods may be traced. With very limited means and a small force of assistants, aided generally by the teachers and school officers of the country, this office has issued an annual report for a series of years, various special reports, circulars, and bulletins. Its correspondents number about 20,000 ; its information from foreign countries is very full. It receives in a single year as high as 30,000 communications, and has sent out 67,000 and distributed over 300,000 documents.

The Interior Department and its Bureaus have issued more than 1,200 reports, books, pamphlets, circulars, etc., and of this number the Bureau of Education is responsible for about eighty. This is the teachers' own office, created in response to their request and administered in compliance with their wishes as expressed in their conventions. It is not necessary to say more now about the place and purposes of this office as a national organ of information.

The Department of Agriculture is one great school of instruction through all its varied laboratories and all its divisions of statistics, entomology, botany, chemistry, forestry, and microscopy ; through its propagating garden, its seed division, its library of valuable works gathered from the civilized world, touching all the subjects of in-

terest in the department ; and its museum illustrating all the economies of agriculture and its soils, agricultural appliances and methods, is one of the most visited at the Capital. Its annual reports are published to the number of three hundred thousand copies ; its monthly and special bulletins and reports are greatly sought by our farmers and those directly engaged in handling farm products. The great work assigned it more than deserves the increasing appropriations, that already reach \$425,000 annually.

The Smithsonian Institution, of which you have heard and read so much, was founded in 1846 by the bequest of the English scientific man whose name it commemorates. The United States accepted the bequest, and created a corporation to manage its funds. When, by an error of judgment, those funds had been invested in State bonds that were repudiated shortly after, the United States replaced the lost money, so that the Institution to-day, while bearing the name of its original benefactor, is in reality supported by the income derived from the Nation's money. Most nobly does it serve the purpose for which it was founded, "the increase and diffusion of knowledge among men." Its annual reports, contributions, and miscellaneous publications have been sent to every important library on the globe, and by its well-managed system of international exchange both the national library at Washington and scores of other collections in all parts of the Union are yearly enriched with the publications of foreign societies and governments. Indeed, so great has this work of exchange grown that it costs the Institution more than \$7,000 every year, and it has been proposed that a Bureau of International Exchange, managed by the Smithsonian, under the supervision of the State Department, be organized. This, however, is but a small part of the work stimulated or assisted by the Smithsonian. For many years its former director, Professor Henry, was the soul of the Light-house Board ; for several years its present director has been the chief of the U. S. Fish Commission, which has done so much for science and for human comfort and national wealth. Almost ever since its foundation the Institution made meteorological observations and published the data accumulated, and from these General Meyer and Dr. Abbe obtained the groundwork on which the Signal Service of the Army has done its great work elsewhere mentioned. The Smithsonian long ago was made the custodian of the National Museum, and into this the geological, geographical, and ethnological surveys and expeditions of the Government have been pouring their priceless accumulations, until a new building has been erected to hold them. Still further, the linguistic and material collections relating

to the American Indians have become so astonishing in value and variety that Congress authorized the establishment of a Bureau of Ethnology in the Interior Department to work in connection with the Smithsonian and the Museum, so as to bring out the results of this direction.

Thus far I have made no allusion to the policy of land-grants, in accordance with which the United States is understood to have done most for the promotion of education and the increase of intelligence and virtue among the people. It is well known that certain colonies were accustomed, in organizing towns and townships, to set apart portions of land in aid of schools, the church, and the clergy. In the Congress of the confederation, Mr. Jefferson was chairman of the committee that in May, 1784, made a report on the organization of the western territory, which provided "that there shall be reserved the central section of every township for the maintenance of public schools, and the section immediately adjoining the same, for the maintenance of religion." The ordinance as adopted on May 28th, 1785, read: "There shall be reserved lot No. 16 of every township for the maintenance of public schools." The ordinance in its final form as passed in 1787 prohibited slavery, required the encouragement of liberty and morality, and set apart the 16th section in every township of public land for school purposes.

Webster, referring to this great act of patriotism, remarks: "We are accustomed to praise the law-givers of antiquity; we help to perpetuate the fame of Solon and Lycurgus; but I doubt whether one single law of any law-giver, ancient or modern, has produced effects of more distinct, marked, and lasting character than the Ordinance of 1787. It fixed forever the character of the population in the vast regions northwest of the Ohio." This great grant has shed its benign influence upon every State since organized, and the total amount of money reported as realized and now in hand, mainly from this source, in these several States reaches nearly seventy-one millions of dollars.

But the care of the fathers for education did not stop with common schools. When Ohio was admitted as a State it received 69,120 acres for superior instruction, and a similar policy has been pursued with other States. The great universities of Michigan, Wisconsin, and Iowa are examples of the results of this university grant of land, amounting in these States to funds, now in hand, reaching to \$6,720,000.

Later, when the question of introducing scientific, technical, or industrial education arose, there followed the great land grant, out of

which have sprung colleges of agriculture and mechanic arts in the several States, whose funds, arising mainly from this source, now amount to \$4,802,000.

The total of these several large grants for education are put down as nearly seventy-nine million (78,659,439) acres, or more than twice as many acres as in the whole territory of England and Wales (37,324,883). A vast amount of these lands are only assigned and not yet sold, so that it is impossible to state what they will ultimately realize in dollars and cents. By various laws a certain per cent. of the sale of lands by the General Government in the new States, has been turned over to these States, sometimes reaching five per cent. of the whole. Under this provision, Illinois received, from 1821 to 1869, over seven hundred thousand dollars. In some of the States these incomes were assigned to the school fund. In quite a number of the States large grants of swamp-lands have been made over to the States, out of which, also, by the action of the several legislatures, has come a very considerable increase to the school funds; how much it is impossible to determine at present.

In addition to these various aids received from the United States for education by the several States, there have been a large number of special grants, as for instance 480 acres to Lafayette University; 160 to the Holy Cross Mission; over 22,000 for the education of the deaf and dumb in Kentucky; 400 to the Pine Grove Academy; and especially large amounts to several towns in Missouri.

In 1836 there was a large surplus in the Treasury of the United States, and an act was passed providing that a definite amount of this should be deposited with the several States in proportion to the number of members of Congress. The total was over forty-two millions, of which three installments were turned over. The fourth installment was not paid on account of financial embarrassments. The amount received was \$95,584 for each member of Congress. These moneys were all held in trust to be paid on call to the United States. A number of States set apart the amount received as a fund, the income of which was to be used for the schools. This was done definitely by Alabama, which received over \$669,000; by Georgia, which received over \$1,051,000; by Illinois, which received over \$477,000; and by Indiana, which received over \$552,000; \$850,000 of the share of Kentucky was set apart for this purpose; Louisiana granted a considerable portion received to the colleges of Jefferson, Louisiana, and Franklin, and the Covington Female Academy; Maryland and Pennsylvania, after paying out of it the public debt, set apart a portion for the benefit of education; Missouri and New York

set apart the whole amount for common schools; North Carolina transferred \$300,000 to the literary fund; Ohio provided that the net income should be used for the encouragement of schools, and Rhode Island did the same; Tennessee set apart her share as a school fund. A number of States distributed the amounts received between counties and towns, and allowed the money to be used for school or other purposes, at their option. How much thus went to schools it is impossible to determine. The whole amount distributed was twenty-eight million dollars. How largely this great supply of money became a factor, contributing to the success of the revival of education at that period, no one can calculate.

Congress, touched by a humane effort to introduce education for deaf mutes in this country, gave 23,000 acres in aid of the establishment of the first institution at Hartford. Moved by a similar sentiment for the blind, it has recently set apart a fund of a quarter of a million, the interest of which is to be appropriated for the printing of books for the blind, which are to be divided equally for the use of the blind in the several congressional districts. These books already in the several States constitute valuable libraries for the use of this interesting class, shut out from the usual sources of information.

But I have not time to dwell upon the splendid school at West Point for the Army, or that at Annapolis for the Navy. Indeed, in closing, I can only mention that last special action of the Government for the organization of the Civil Service Commission, intending to examine more critically into the qualifications of those who enter the classified service of the Government, and thus to place a premium on good attainments and good character, and therefore impart new stimulus to the instruction of the people throughout the land.





## *THE UNIVERSITY—HOW AND WHAT.*

BY WILLIAM W. FOLWELL.

[*Abstract.*]

The present state of the higher education in America can be briefly comprehended in one word,—chaos. Thirty years ago there was a college course, simple and distinctive,—the education of the gentleman and the clergyman. The good old classical curriculum has nearly faded from view ; though its thread of good still runs along the broad web of scholastic life and work.

The elective system has come in like a flood. When there is not full election of studies, there is election from numerous courses of study. This election descends into the preparatory schools, and we see youth of fifteen choosing their studies, as they choose their hats and shoes ; albeit with somewhat greater independence of fashion. The elective system has been vastly extended through the competition of an excessive number of small denominational colleges, for attracting students. Here we meet the signs of a religious chaos which is chiefly the cause of the confusion in our higher education. Each sect is logically bound to undertake the conversion of mankind to its particular tenets. Otherwise it has no right to exist. Colleges and universities are regarded as a necessary part of the apparatus of evangelization. The political chaos is hardly less conspicuous than those of religion and education.

Such is the aspect of affairs as we view them, faced to the rear. Looking forward, the prospect is brighter. Civil service reform promises at length to bring order out of political chaos. The clear and constaneous movement toward fraternization, not to say consolidation, of sects indicates the ultimate reunion of the body of Christ. Already has this amicable spirit affected education. As fast as sects and churches have caught it, have they disbanded the schools of the sect, and thrown their influence in support of the school of the Christian community. We are emerging, then, from chaos. There is a certain spirit of the age which assists. We look to our knowledge of the knowable, rather than to our surmises about the unknowable. Ours is the age of science, not of superstition. The spirit of the age appears in the higher education of modern nations. It has transformed the universities of Europe from strongholds of ecclesiasticism into grand emporiums of knowledge and

research. The university will at length appear in America. Has it not yet appeared? Are there not among the hundred and more institutions calling themselves universities, some which in character correspond to the title? Probably not. Why? Simply because they are loaded down,—handicapped with a vast burden of work which has no place in genuine universities. Now it needs to be sounded up and down the land that there can be no genuine university in America until there shall have been developed atop of the primary schools a system of secondary schools, more extensive and efficient than those now existing, in which students may do all the work which precedes a proper university course.

The people need to understand that there is a natural division of education-work into three distinct but adjacent epochs: the primary education for the child, the secondary education for the youth, the superior education for the adult. No system can be complete and orderly which does not embrace these three, properly assorted. If we have no genuine universities in our country, it is because we have no suitable system of secondary schools. In the attempt to build universities before developing secondary schools, our States have reversed the order of nature. Everywhere the cry needs to be raised,—“No more colleges, no more universities, till we have more and better middle schools!”

We need, then, secondary schools of high rank, with courses of study extending about midway up the average college course, as the foundation for the genuine university. We also need them for their own work and influence. The Americans have been called the most common-schooled, and least-cultured people in the civilized world. Matthew Arnold is probably right in pronouncing us a vast horde of Philistines, happily unburdened, however, as his English countrymen are not, by a vulgarized populace and materialized barbarism. Mr. Arnold proposes, as the remedy both for England and America, the development of the secondary education. The common schools must continue to teach children those rudiments indispensable to the civilized man. The secondary school is needed to diffuse culture and develop directive power. The development of the secondary education will simplify many vexatious educational problems.

*First:* The problem of elective studies. In primary schools there will be no elective; in universities there must be absolute election; in secondary schools there will be merely the election between literary and technical careers. The steady, patient pursuit of some line of studies, approved by experience throughout the period of youth, is essential to education in the true sense of that word. The pres-

ent American college being about half university and half secondary school, we have a miscellaneous confusion of methods and discipline.

*Second:* The dormitory problem. Build up the high grade secondary school in every considerable town, to which the youth may resort from their own homes, and not much remains of this question. The modern, the Protestant idea is to link home and school fast together; it is the mediæval, the monastic idea, which segregates youth from home and parents, and places them under the care of teaching priests.

*Third:* The coëducation problem. Build up the local high school till it shall be the homologue of the gymnasia of Germany, or lyceum of France, and let your daughters resort to it from the safe harbor of home, and this problem is more than half-solved at once.

*Fourth:* The problem of industrial education. We shall soon be obliged to follow the example of older civilizations in respect to this education. The attempt to organize industrial work in connection with literary colleges has not proved successful, and will not. This education assorts naturally with that of the secondary epoch, and forms part of the training of youth.

*Fifth:* The problem of business education; and sixth, that of the military education. Both of these fall naturally into the secondary epoch, and have no place among the studies which occupy the grown man in the university.

The genuine university awaits, then, the previous arrival of the secondary school. When it shall appear it will be recognized, not by the splendor of its housing and equipments, but by these two signs: 1. A large body of mature students whose secondary education shall have been completed, and who are ready for the studies of men; and 2. By a body of teachers who are experts and specialists, conducting and administering its affairs. Given these two things and they form a university, no matter if they meet in sheds and lofts.

It is of the nature of the university to have all knowledge for its province. All sciences have a common bond, and are at home within her precincts. The linguistic, historic, and philosophic sciences will ever hold their place. The political sciences, now that democracy has come and come to stay, have an importance vaster than ever. If the people will govern themselves, the people must know,—good fellowship and patriotism will avail nothing without knowledge.

The genuine university, then, lies in the future. The college of the present day is doing such work as there is to do. Since no magic can give both at once, it is doubtless far better to be much common-schooled than much cultured. The work of the generic university is not worth while, except as it arises from and responds to a wide and deep general culture. The immediate work for America is the development of their secondary education.



# CIRCULARS OF INFORMATION

OF THE

## BUREAU OF EDUCATION.

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No. 3-1883.

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PROCEEDINGS OF THE DEPARTMENT OF SUPERINTENDENCE OF THE  
NATIONAL EDUCATIONAL ASSOCIATION AT ITS MEETING  
AT WASHINGTON, FEBRUARY 20-22, 1883.

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## LETTER.

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DEPARTMENT OF THE INTERIOR,  
BUREAU OF EDUCATION,  
*Washington, D. C., May 18, 1883.*

SIR: The accompanying papers contain the records of the proceedings of the recent meeting of the Department of Superintendence of the National Educational Association, together with the addresses presented during the several sessions.

Their publication in this form has the advantage of bringing out the carefully prepared statements of those who presented papers and the various experiences and views of others who joined in the discussions.

The demand for the proceedings of the previous meeting has been so great as to exhaust the first edition and require a second issue.

Very respectfully, your obedient servant,

JOHN EATON,  
*Commissioner.*

The Hon. SECRETARY OF THE INTERIOR.

Publication approved.

M. L. JOSLYN,  
*Acting Secretary.*

81-82





# NATIONAL EDUCATIONAL ASSOCIATION.

## DEPARTMENT OF SUPERINTENDENCE.

### PERSONS IN ATTENDANCE.

General S. C. Armstrong, principal of Normal and Agricultural Institute, Hampton, Va.

Principal George P. Beard, State Normal School, California, Pa.

Professor Albert S. Bickmore, PH. D., American Museum of Natural History, Central Park, New York.

Hon. John M. Birch, superintendent of schools, Wheeling, W. Va.

Professor J. H. Blodgett, Rockford, Illinois.

Henry C. Brown, esq., secretary of the international committee of the Young Men's Christian Association, New York, N. Y.

Mr. G. M. Brumbaugh, Normal College, Huntingdon, Pa.

Hon. B. L. Butcher, State superintendent of free schools, Wheeling, W. Va.

Hon. N. A. Calkins, president of the Department of Superintendence, assistant superintendent of schools, New York, N. Y.

Hon. G. F. T. Cook, superintendent of colored schools, Washington, D. C.

Hon. Newton C. Dougherty, superintendent of schools, Peoria, Ill.

Mrs. Sarah B. Earle, member of board of education, Worcester, Mass.

Professor J. R. Eastman, Naval Observatory, Washington, D. C.

Rev. Horace Eaton, D. D., Palmyra, N. Y.

Hon. John Eaton, United States Commissioner of Education, Washington, D. C.

Hon. C. G. Edwards, assistant superintendent of schools, Baltimore, Md.

Miss A. C. Fletcher, Indian Territory.

A. P. Flint, esq., Philadelphia, Pa.

W. H. Gardiner, esq., chief clerk Bureau of Education, Washington, D. C.

Rev. J. A. Hamilton, Norwalk, Conn.

Hon. Henry M. Harrington, superintendent of schools, Bridgeport, Conn.

Hon. Wm. T. Harris, LL. D., Concord, Mass.

Rev. A. G. Haygood, D. D., general agent of the John F. Slater fund, Oxford, Ga.

- Hon. John Hitz, Washington, D. C.  
Hon. Dwight Holbrook, superintendent of schools, Clinton, Conn.  
B. T. Janney, esq., supervising principal, Washington, D. C.  
Hon. H. S. Jones, PH. D., superintendent of schools, Erie, Pa.  
J. R. Keene, esq., supervising principal, Washington, D. C.  
Hon. John E. Kimball, superintendent of schools, Newton, Mass.  
Hon. William Lawrence, First Comptroller of the Treasury, Washington, D. C.  
B. G. Lovejoy, esq., member of school board, Washington, D. C.  
Hon. George J. Luckey, superintendent of schools, Pittsburgh, Pa.  
G. G. McLean, esq.  
Hon. A. P. Marble, PH. D., superintendent of schools, Worcester, Mass.  
Rev. A. D. Mayo, Boston, Mass.  
Professor H. P. Montgomery, supervising principal of colored schools, Washington, D. C.  
W. S. Montgomery, A. M., supervising principal of colored schools, Washington, D. C.  
Hon. M. A. Newell, LL. D., State superintendent of public instruction, Baltimore, Md.  
Hon. B. G. Northrop, LL. D., ex-secretary State board of education, Newton, Conn.  
Professor C. C. Painter, Nashville, Tenn.  
Rev. Wm. S. Palmer, D. D., chairman board of education, Norwich, Conn.  
Rev. W. W. Patton, D. D., president of Howard University, Washington, D. C.  
Professor E. A. Paul, principal of high school, Washington, D. C.  
Hon. Jos. Desha Pickett, State superintendent of public instruction, Frankfort, Ky.  
Professor Zalmon Richards, Washington, D. C.  
Hon. A. J. Rickoff, superintendent of schools, Yonkers, N. Y.  
Hon. Henry R. Sanford, superintendent of schools, Middletown, N. Y.  
J. W. Schermerhorn, esq., New York, N. Y.  
Hon. James H. Smart, ex-State superintendent of public instruction, Indianapolis, Ind.  
Hon. R. W. Stevenson, superintendent of schools, Columbus, Ohio.  
President Eli T. Tappan, Kenyon College, Gambier, Ohio.  
Dr. Henry R. Waite, special educational agent of the Census Office, Washington, D. C.  
Dr. Charles Warren, statistician of the Bureau of Education, Washington, D. C.  
Hon. Joseph White, ex-secretary State board of education, Williamstown, Mass.  
Hon. J. O. Wilson, superintendent of schools, Washington, D. C.  
J. M. Wilson, esq., Washington, D. C.

## FIRST SESSION—TUESDAY EVENING.

WASHINGTON, *February 20, 1883.*

The members of the Department of Superintendence of the National Educational Association and their friends met in the High School Hall at 8 o'clock P. M., Hon. N. A. Calkins, the president, in the chair, and Hon. H. S. Jones secretary.

After calling the meeting to order and announcing the sessions for the following day, Mr. CALKINS said:

In introducing to you the speaker for this evening, it is proper that I should state, in regard to the selection of the subject which he will present—natural history in public schools—that the invitation to Professor Bickmore to come before you was suggested by the character of the work which he is doing for the public schools of the city of New York. Believing that there would be many of those in attendance at this convention who would be pleased to learn what is done there in the matter of introducing natural history into the public schools and knowing that any mere description of that work would fail to give you an accurate idea of it, Professor Bickmore was invited to come here, to bring with him some of his apparatus, and to show you what he is doing for the schools of that city.

I may add that arrangements have been made with Professor Bickmore by which he gives on Saturdays, in the Museum of Natural History at Central Park, lectures before teachers of the grammar schools, as a means of preparing them to give instruction in natural history in the schools where they are employed. These lectures are thus made to awaken an interest in this subject among the pupils in the schools, which leads them to visit the museum, as many do with their teachers. During lessons in school, which follow these visits, questions are asked these pupils concerning the animals which they saw and the subject of the lesson is discussed in an intelligent manner.

But Professor Bickmore will be able to represent to you what he is doing much better than I can tell you. I now have the pleasure of introducing to you Prof. Albert S. Bickmore, of the American Museum of Natural History, Central Park, New York, who will address you on the subject of

**NATURAL HISTORY IN PUBLIC SCHOOLS: ITS UTILITY AND PRACTICABILITY AS ILLUSTRATED BY THE METHODS ADOPTED IN NEW YORK CITY.**

Professor BICKMORE said:

MR. PRESIDENT, LADIES AND GENTLEMEN: About two years and a half ago the authorities of the museum with which I am associated addressed

a letter to the board of education of our city, suggesting that they select a limited number of their teachers to come up to our institution, and that I should give them conversational talks (we scarcely call them lectures) upon the objects that we had on exhibition in our halls. It proved to be an extremely stormy day in winter when the first gathering took place, but all those invited were present, and we were at once impressed with the magnitude and importance of the work thus thrust upon us. The attendance of the teachers was so constant that the six informal talks were extended to eighteen or twenty. The board of education then addressed us a letter expressing their high estimation of the work thus begun and asking that fifty teachers be allowed to be present at the next course. At the conclusion of these lectures the board wrote us a second letter stating that there were one hundred and four schools in our city under their direction and asking if accommodations could be made for at least one teacher from each of them, in order that there might be a distinct, definite influence going out from our museum every week to each school, conveying important instruction and aiding the teachers to give the most complete information to their pupils upon human and comparative anatomy and zoölogy and other subjects upon which the board might require oral instruction to be given in the common schools. A course on zoölogy is now in progress, and every Saturday our little hall is filled to overflowing.

Believing that the sense of sight is the royal avenue to the mind and that all information which can be conveyed by the eye is much more complete and satisfying than that conveyed by the ear, I planned to give the instruction desired by ocular demonstration, that is, by exhibitions. A large part of the objects we wished to display to the teachers are too small to be seen distinctly by the naked eye, and yet their remains in some places make up the chief bulk of mountain ranges. Other animals, as the deer, the ox, the horse, the moose, and the elephant, are far too large to be transported from the exhibition halls to the lecture room, and yet they are among the most interesting objects to the children that are to be found in the animal kingdom. How we could easily and without loss of time place these various objects visually before the class of teachers was the problem that came to us when we found the personal interest they manifested in this department of natural science. We purchased the most complete stereopticon to be obtained, but we found that photographic transparencies of the objects we desired to display could not be discovered in any of the lists of slides offered for sale in London, Paris, or Vienna, and that, if any teacher had hitherto prepared them, he had never published any account of his work nor indicated how his successors might avail themselves of his labor.

A few views of the animals in the Zoölogical Society's Gardens of London were found and a few copies from works on anatomy; but no continued, systematic series of illustrations existed, so far as we are aware. An assistant skilled in this department of the photographic art was em-

ployed to make negatives and slides from the specimens on exhibition in our public halls, supplemented by copies from the best illustrations in standard works on natural history. The prominent book and map publishers of London and New York cordially aided by striking off uncolored impressions of their wood-cuts and engravings for the use of our photographer, who has already made some 800 negatives, in addition to the large series of views we have purchased from every available source. The transparencies which we have made at the museum so far exceed in clearness and brilliancy any that we have found in the market that we propose in time to use only prints on glass from negatives of our own manufacture. This system of illustration can be made just as elaborate as the time and means of the instructor may permit. What we have so far accomplished we regard merely as a beginning in the important work of enabling teachers to properly educate their pupils in zoölogy. The same mode of effective illustration is equally applicable and important in teaching physical geography, geology, and mining, and every other department of natural science which can be rendered more instructive and therefore more interesting by photographic views, diagrams, or ideal sketches. The field of labor thus opened to the instructor is a wide one, for it demands that he shall not only be thoroughly conversant with the latest and best maps and drawings and other means of illustration that now exist, but that he shall keep constantly adding new transparencies from the latest explorations in these various departments in every land.

The negatives being once provided, the slides can be supplied at little more than half the price now paid for such transparencies, and, while we shall use here this evening the oxyhydrogen or lime light we have brought from New York, I am happy to say that I have seen these same slides shown by a light burning simply kerosene oil, and the illumination was sufficient for an ordinary class room containing 50 to 75 pupils. Any teacher here present that can take proper care of an ordinary kerosene lamp can, therefore, with the simple lantern of which I speak, effectively repeat to his class the illustrations which our lime light will now place on the screen.

This mode of exhibition necessitates a darkened room, and, as I have experienced the inconvenience of not being able to exhibit specimens or make diagrams on the blackboard while the illustration is on the screen, I have introduced into my lecture room a second lantern, which throws a light upon any portion of the blackboard I may desire, so that the classification of the animals to be shown is constantly before the audience while the several specimens appear in succession on the screen. In an adjoining place in the room I have fitted up a series of shelves, like a case in our public hall, on which the specimens to be described are arranged. Diaphragms pierced with round or square holes of varying dimensions will light up any portion or all of the specimens on the shelves, and in this simple method we are able to transfer our audience instantly



from the lecture room to our exhibition halls, and that, too, in a more effective way than if the audience actually passed into one of the large rooms, for in the hall some persons would be looking at one object in one case while others would be interested in other objects in other cases; but by confining the light to the specimens that are being described we concentrate the attention of all to the object or group of objects we are discussing, and the mind of the speaker and the minds of all his audience necessarily move on from point to point in the discussion in perfect harmony.

Professor Bickmore then gave a description of the building occupied by the American Museum of Natural History, which contains four stories and a gallery and was erected at an expense of \$700,000. He then showed upon a large screen, by the aid of a stereopticon, the following subjects, calling attention to the principal facts of interest concerning each: protozoans: a young sponge, the Venus flower basket, corals, ideal sketch of the bottom of the sea in the Mediterranean, a coral island (atoll, Bermudas), brittle stars; mollusks: a common salt water mussel, oysters, the mode of dredging off the shores of France, a dredge, a helix, a cone, a large squid, the squid as it was represented in old books; articulates: a "common" and a "spiny" lobster, a lobster car, the violet crab of Jamaica; insects: a minute insect, a flea, Colorado beetle; vertebrates: the arm and hand of a fish, tortoise, whale, deer, seal, dog, mole, bat, ape, and man; fishes: a climbing perch, the circulatory system of a cod; reptiles: a boa constrictor, a water boa or anaconda, the structure of the fangs of a rattlesnake, an iguana, a tropical scene from Brehm's Thierleben, chameleon, turtle catching, an ideal view of marine animals in the Triassic period, a landscape in the coal period; birds: an ostrich in the Paris museum, a gull, sand-piper, flamingo, a male and female humming bird, the migration of birds, a view on a Siberian river in early spring, the nest and young of the gray plover, the light-house at Heligoland on a migration night, a map of our own country, a map of South America, a relief map of Europe; mammals: the skeleton of a cow, the Brahman bull, Brahman cow and calf, antelope from the Rocky Mountains, a giraffe, the skeleton of a giraffe, skeleton of a deer, a fossil deer found in Ireland, a camel, a dromedary, skeleton of a camel, the wild boar of West Africa, the skeleton of a hog, African wart hog, rhinoceros, the skeleton of a rhinoceros, a horse, zebra, zebra hunting in South Africa, a European wolf, a royal Bengal tiger, lion, the skeleton of a lion, the animals of the stone age; man: two slides of human anatomy (colored), the African race—a view on the Congo, Stanley and his followers, the Zulus; the Mongolian race—a Chinese mandarin, a Chinese hamlet among the tea hills, curling the tea leaves, sorting tea; the Aryan race—a native of India, a Mohammedan prince of India, a Mohammedan temple at Lahore.

The president announced that there would be a business meeting

immediately after the dispersion of the audience and requested the members of the department to remain.

At this meeting the following resolution was offered by General EATON, and was adopted:

*Resolved*, That an executive committee of three members of the department be appointed by the president, and it shall be the duty of said committee to arrange and report an order of proceedings for this meeting.

The president named as this committee Messrs. Wilson, of Washington; Marble, of Worcester; and Pickett, of Kentucky.

Mr. WILSON offered the following:

*Resolved*, That the president of this department be requested to appoint a committee whose duty it shall be to represent to Congress the views of this association on the subject of national aid to education, and to take such further action in the premises as may be deemed advisable.

After the unanimous adoption of this resolution, the department adjourned to meet on the following morning in the lecture room of the Congregational Church.

## SECOND SESSION—WEDNESDAY MORNING.

WASHINGTON, *February 21, 1883.*

The members of the department assembled in the lecture room of the Congregational Church at 10 o'clock and were called to order by the president. Rev. A. D. Mayo opened the session with prayer.

Hon. Henry M. Harrington, of Bridgeport, Conn., was elected treasurer, and Mr. J. E. Rockwell, the stenographer, assistant secretary.

Mr. WILSON, from the committee on order of exercises, announced the following topics and speakers:

Address by the president.

Industrial education. Reports on the subject to be read by Supt. John E. Kimball and Dr. Charles Warren; followed by discussion.

Educational lessons of the census, by Dr. Wm. T. Harris.

The following letter was received:

OFFICE OF SUPERINTENDENT OF PUBLIC SCHOOLS,

FRANKLIN BUILDING,

*Washington, D. C., February 20, 1883.*

DEAR SIR: The members of the department of superintendence are cordially invited to visit the public schools of this city. The schools will be in session to-morrow, Wednesday, and will then be closed until Monday next. The Webster School, corner Tenth and H streets, and the Franklin School, corner Thirteenth and K streets, are both near the Congregational Church, the place of meeting for the department.

Very respectfully,

J. ORMOND WILSON,  
*Superintendent.*

Hon. N. A. CALKINS,  
*President, &c.*

The president announced that the treasurer would receive applications for membership in the association.

The assistant secretary read several expressions of regret from members unable to be present. Among the letters received were those from Hon. Thos. W. Bicknell, LL. D., editor *Journal of Education*, Boston, Mass.; D. N. Camp, A. M., New Britain, Conn.; Hon. Charles L. Collier, superintendent of schools, Memphis, Tenn.; Hon. A. Coward, State superintendent of public instruction, South Carolina; Hon. J. L. M. Curry, LL. D., general agent of the Peabody education fund, Richmond, Va.; Rev. J. H. Cuthbert, Washington, D. C.; Hon. R. R. Farr, State superintendent of public instruction, Richmond, Va.; Hon. J. M. Fish, superintendent of schools, Little Rock, Ark.; Hon. Aaron Gove, superintendent of schools, Denver, Colo.; E. L. Kellogg, esq., 21 Park Place, New York; Charles G. Leland, esq., Philadelphia, Pa.; Hon. E. B. Neely, superintendent of schools, St. Joseph, Mo.; Hon. James MacAlister, superintendent of schools, Milwaukee, Wis.; W. A. Mowry, PH. D., Providence, R. I.; Rev. A. M. Pitzer, D. D., Washington, D. C.; Lieut. R. H. Pratt, U. S. A., superintendent of Indian training school, Carlisle Barracks, Pa.; Hon. W. C. Rote, superintendent of schools, San Antonio, Tex.; Hon. J. C. Shattuck, State superintendent of public instruction, Denver, Colo.; W. E. Sheldon, esq., editor of *The Primary Teacher*, Boston, Mass.; Governor Hugh S. Thompson, Charleston, S. C.; Gen. Francis A. Walker, Census Office, Washington, D. C.; Hon. J. P. Wickersham, LL. D., ex-State superintendent of public instruction, Lancaster, Pa.; Hon. C. S. Young, State superintendent of public instruction, Carson City, Nev.

Mr. CALKINS, the president of the Department of Superintendence, delivered the following address:

#### ADDRESS OF THE PRESIDENT.

MEMBERS OF THE DEPARTMENT OF SUPERINTENDENCE OF THE NATIONAL EDUCATIONAL ASSOCIATION: Once again representatives of the educational systems of the States and cities of the nation have assembled at its capital to consider matters pertaining to the interests of public instruction. The fields of labor occupied by those gathered here are widely separated and the work performed by each has differing characteristics, yet there exists a union of purpose among all which binds us together as a brotherhood, laboring for the noble cause that contributes much toward the stability and prosperity of our beloved country.

I rejoice with you that it has become our annual custom to come hither and confer with each other fraternally in relation to those things that belong to a general diffusion of education among all classes of people, and that in this work we have common interests and aims.

The circumstances attending our respective spheres of work often compel attention to matters that demand serious deliberation and the exercise of sound wisdom to guide aright in the acts that must follow. In the midst of the difficulties that sometimes meet us we long to

inquire of a successful brother who has overcome similar obstacles and learn from his experience. These fraternal conferences furnish opportunities for such inquiries; they also inspire our hopes and strengthen our hands for better work and greater success in the cause of education.

The present outlook as to progress in the direction of better elementary teaching and the corresponding results that follow in general education is gratifying. During the past ten years great strides have been made by the thinking, progressive teachers toward a clearer knowledge of child nature and in right ways for reaching child mind. The results appear in the more general development of power among the pupils of these teachers to observe carefully, of ability to think understandingly concerning that which has been seen, and in the firm foundation thus laid for subsequent attainments in knowledge.

It is fast becoming understood that mere imitators soon attain their growth in teaching and that the end of real progress with them is near the place of starting. Among the hopeful signs for the future is the fact that so many of our schools are becoming fields in which the teachers are themselves making important discoveries in the true work of education, instead of contentedly following the traditionary customs of the past. The fact that so many teachers are turning their attention to psychology and earnestly inquiring after a science of education which may guide them in the art of teaching is a hopeful sign.

Great changes, also, have been made in the means for diffusion of educational intelligence during the past decade. We now have not only monthly and bimonthly but weekly journals, with large circulations, devoted to the interests of education in all its varied aspects. In addition to these the weekly and daily papers reflect the general interest of the public in relation to educational matters in their several localities.

Whenever the minds of those engaged in the work of education in one locality become unusually active in relation to a particular department of the work or concerning anything intimately affecting it, that activity widens and widens, like the circling waves on the placid lake into which a pebble has been tossed, until the distant shores are reached. Let the cry be raised in Boston against the burden of too many text books, and its wail will be echoed in Chicago and in San Francisco. If the public in Quincy discover a supposed better way for education, pilgrimages are made, and the towns of the East, of the West, and of the South are moved thereby.

As an instance of the increasing interest in matters that relate to methods of education, it may be mentioned that only a few months ago the Bureau of Education issued, as a circular of information on industrial art in schools, an article prepared by Charles G. Leland, esq., of Philadelphia, in which the way is pointed out for making hand work and school work coöperate with each other in general education and culture. Fifteen thousand copies of this circular of information have

been distributed already. The mail of a single day recently brought orders for more than six thousand copies.

In these and kindred facts, we may find much for encouragement and hope that the widening diffusion of intelligence on subjects pertaining to public education will ere long produce a corresponding extension of increased facilities and improved character in the common schools of every State. In view of these facts, we are reminded, also, of the necessity for careful consideration of matters relating thereto, especially by those who occupy positions which should exert great influence in deciding what the public schools shall become, by means of an intelligent public opinion. It is fitting on this occasion, therefore, that we direct our deliberations to those matters which relate intimately to the work of securing a better education for the people. And in these deliberations we should aim to call out the best thoughts and ripest experience on the topics considered, while each endeavors to say the most in the fewest words possible.

It was with the view of facilitating such deliberations that I placed in the programme of subjects for this meeting that of "School supervision: its specific aims and methods employed," and invited superintendents to consider topics designated under this subject and to present at this meeting results of their experience in relation thereto, in concise statements. And, further, I believe that a fair portion of the time of the meeting of this Department should be spent in efforts less formal than exhaustive addresses, with a view to making available the experience and wisdom of the greatest number in matters pertaining to our special duties in connection with the work of education. And with this view, I commend to your consideration the advisability of devoting the time of one session of this meeting to topics relating to school supervision. In this connection allow me to suggest that the least possible time be consumed in stating theories and that the chief aim of all be to show how the desired results in supervision may be secured. May each of us return to his field of labor with garnered treasures.

Finally, allow me to bespeak your counsel and coöperation in efforts to make this a profitable and pleasant meeting.

#### INDUSTRIAL EDUCATION.

Superintendent JOHN E. KIMBALL read the following letter from the principal of the Dwight School, Boston, with his report on industrial education :

BOSTON, *February 12, 1883.*

MY DEAR SIR: The experiment in industrial education is to be tried in the Sherwin School, under the auspices of the school board, during the coming season. In my own school the expenses were paid by a syndicate of wealthy gentlemen and ladies who were interested in the subject. The success was so great that the board assumed charge of it, and now only await an appropriation from the common council of \$500 to perfect their arrangements.

I have no doubt the success will be as decided in the Sherwin School as it was with

me, and, if so, the plan will gradually grow into favor, and will be extended to other boys' schools throughout the city.

Yours, very truly,

JAMES A. PAGE.

Hon. N. A. CALKINS,

*President Department of Superintendence.*

## REPORT.

CITY OF BOSTON.

IN SCHOOL COMMITTEE, *July 5, 1881.*

*Ordered*, That the principals of the Dwight and Sherwin Schools be authorized to accept the liberal offer of the Industrial School Association, and to permit such of their pupils to receive the instruction thus tendered as may, in their judgment, be best fitted to profit by it, the instruction to be given at such time as will least interfere with the progress of the pupils in their regular studies.

*Ordered*, That the abovementioned principals be instructed to report to the board the results of the instruction thus given at the end of the school year.

In compliance with the above order, I respectfully submit the following as my report:

In order to carry out the generous offer of the association, it was thought necessary, at the outset, to secure a good room in which the lessons in manual instruction might properly be given to the pupils of the two schools mentioned in the order. During the early fall considerable time was taken and many visits were made to different parts of the district in search of such quarters. The committee of the association found, however, no single place that was not open to serious objection either on the ground of poor light and ventilation or on that of bad surroundings.

It was not until they concluded to accept one of the school rooms of the Dwight School building, for the time being not in use, that they felt that any progress had been made in that direction.

It was owing to this difficulty of obtaining suitable rooms that Mr. Stone, of the Sherwin School, agreed with the committee and myself that the experiment had better be confined to one school, and that it should be the one under whose roof the trial was to be made. This room, though rather small (27 feet by 27 feet), was found in other respects to be a good one for the purpose.

The superintendent of public buildings ordered the seats to be taken out, the room was cleared of all its school furniture, the benches were placed, the tools bought, the teacher, Mr. Walter Bachelder, a carpenter and builder, of Chelsea, was secured, and everything was ready to begin in December, 1881, soon after the annual municipal election. This room had been designated by the city council as one of the voting places in the ward.

On the first Thursday of January the instructor gave his opening lesson to a class of eighteen boys, all that could be accommodated at the three benches at one time. These boys had been selected by myself from the graduating class, without reference to their standing, and no conditions were made with them except that they should not fall behind in their regular school work. Another class of the same number was selected from the second, third, and fourth classes, in order that the experiment might be tested by a wider application to ordinary grammar school material. Many of these latter had already handled tools, to a certain extent, either at home or in their fathers' workshops.

In arranging the practical details of the school with Mr. Bachelder, it had been agreed that school discipline should be maintained throughout the sessions; that the programme should be carefully written out on the blackboard; that each boy should be marked on the work done; and that a record of it should be kept. All this was faithfully carried out, and contributed, as I think, largely to the final success.

From this beginning to the close the school went on with unbroken and successful regularity. The teacher was promptly on hand, the order was good, the pupils were interested. It was delightful to see the eager desire manifested everywhere in the room to do the day's work well.

There was no absence, no tardiness. On one occasion a count was made, and seventeen out of eighteen pupils were found at work at one o'clock, when two was the hour for beginning.

It was feared that the noise of many hammers and other tools, in use at once (as was necessary in giving the same lesson to a whole class), would be so great that the other rooms on the same floor might be seriously disturbed. It was arranged, therefore, that the school in the adjoining room should proceed to the hall whenever a lesson in the training room was going on. Practically, however, no trouble was felt from this source. The walls in the school room were found to be so thick as to deaden the sound almost completely.

It was thought, also, that taking a part of a class away from its regular school work would result in more or less detriment to its progress in the prescribed studies. Here and there a complaint was made by the teacher of some second class boy that he was not doing his work well in his own room; but the pupil, in every case, was so anxious to remain in the "carpenters' class" that a word or two of warning was sufficient to bring his performance up to the standard again. \* \* \* I consider that the results go far to prove that manual training is so great a relief to the iteration of school work that it is a positive benefit rather than a detriment to the course in the other studies.

The lessons, as prepared and given by Mr. Bachelder, are appended to this report and marked "A."

The school was visited by a large number of ladies and gentlemen, some of them from distant parts of the country and many of them anxious to learn the details of the plan upon which the school was carried forward. It was also visited by members of the school board, the superintendent of schools, and by many educators of all grades, thus showing a widespread interest in the general question of manual training in the public schools.

The cost of the school to the association from January to May, inclusive, five months, as furnished by Henry S. Grew, esq., treasurer, covers every item of expense in a school of this size, except those which, in another building, would have to be met under rent, lighting, and heating. The figures in full will be found in the paper marked "B."

Here, perhaps, I ought to close my report, having answered the demands of the order passed by the school board in giving the results of the instruction in manual training in the Dwight School. But I have a conviction, and, with permission, beg to state it here, that this instruction is surely in the line of the teaching that is to be. I would be glad, therefore, to see the experiment still further tried and all the experience which has been gained and all the plans which have been essayed fully formulated, availed of, and worked out into practical details, so that by and by, at the proper time, the best Kindergarten work, the best object teaching, and the best methods of manual instruction shall be known and, furthermore, shall be "organically combined with the whole scheme of education, and be made to support and coalesce with all the other studies of the child."

It is easy to see that this hand instruction may be made the means of teaching whole chapters of arithmetic more thoroughly. I have seen it made the means of teaching geography and natural history effectively in our own school.

There are high authorities who believe there can be no thoroughly clear, vigorous, and enlightened brain without the cultivated hand. Such are Sir Charles Bell, the author of the *Bridgewater Treatise on the Hand*, and Dr. William B. Carpenter, the physiologist, now visiting this country. If these men are right, then manual instruction introduced into our schools would be a step forward, because it would have

a special value of its own in developing the mind, which is the avowed purpose of all schools.

The great difficulty will be the lack of competent teachers. But that difficulty may be met, as it has been successfully met once before. What has been done in the matter of drawing may yet be done in industrial work. A corps of teachers, as suggested by General Walker, may be furnished by the Institute of Technology, and that institution may eventually do for industrial what the normal schools of the State have done for general instruction.

I have, in closing, to acknowledge the interest shown in the school by very many friends, to whom I feel under great obligation; especially to the Rev. Mr. Chaney, the president of the Industrial Association, and to Mr. Henry S. Grew, its untiring treasurer; to Dr. J. G. Blake, who spoke words of encouragement and advice to the boys in the midst of their work; to Mr. Bachelder, the faithful teacher of the class; and to many others who gave their encouragement and support by visiting the school again and again.

JAMES A. PAGE.

*"A."—Topics of the Industrial Class of 1882.*

*Lesson I.*—(1) Striking square blows; (2) nailing, first process; (3) nail and setting nail; (4) nailing on line; (5) nailing flush; (6) blind nailing.

*Lesson II.*—(1) Toenailing; (2) straightening small piece of pine; (3) planing surface of small piece of pine; (4) planing surface of large piece of pine.

*Lesson III.*—(1) Joint and square the edge of the board; (2) remove the jointer's iron, and readjust it; (3) learn to use the gauge; (4) learn to use the splitting saw; (5) learn to use the rule and pencil in drawing parallel lines.

*Lesson IV.*—(1) Learn to use the chalk and line; (2) learn to use the try square with pencil and knife.

*Lesson V.*—(1) Learn to use the cutting-off saw; (2) remove the jointer's iron; (3) sharpen the plane iron on the oil stone.

*Lesson VI.*—(1) Learn to use the cutting-off saw with bench hooks; (2) learn to use the block plane; (3) learn to cut a chamfer with a chisel.

*Lesson VII.*—(1) To cut a chamfer with a plane; (2) to learn to use the bit and bit brace.

*Lesson VIII.*—(1) To plane a piece to an even thickness and width; (2) to make several pieces of the same length and width; (3) to make one piece of a certain length and width.

*Lesson IX.*—(1) To nail together several pieces, work out the same, making a box with three apartments; (2) to plane a piece of an even thickness, one end to be wider than the other; (3) to make a tenon.

*Lesson X.*—(1) Paring with chisel; (2) cutting chamfer with chisel and plane; (3) to make a piece having eight sides or corners.

*Lesson XI.*—(1) Marking and boring; (2) to reduce each end of the eight-cornered square pieces to fit a  $\frac{1}{2}$  hole; (3) to make a mortise.

*Lesson XII.*—(1) To cut a square block to a described shape; (2) to chamfer the same; (3) to sand-paper the several pieces.

*Lesson XIII.*—(1) Sand-papery; (2) fitting together the different pieces to make good joints; (3) to put together the different pieces with glue.

*Lesson XIV.*—(1) To make a box for the oil stone, to be made of two pieces of wood; (2) to halve together two pieces.

*Lesson XV.*—(1) To make an open mortise and tenon; (2) gluing.

*Lesson XVI.*—(1) Make a double open mortise and tenon; (2) sand-papery; (3) to plane and square.

*Lesson XVII.*—(1) To make a tenon (review); (2) to make a mortise; (3) to fit them together; (4) to plane and square.

*Lesson XVIII.*—(1) Planing and squaring; (2) marking; (3) making tenon (review); (4) mortise to be made (review); (5) to fasten mortise and tenon with draw bore.

*"B."—Statement of cost of industrial school held in the Dwight School-House, Boston, January to May, 1882.*

Thirty-five lessons, of two hours each, to two classes of 18 each (36 boys, each two hours' lesson per week):

Instructor .....	\$175 00
Stock; boards and material to work up .....	20 75



Sundries .....		\$21 43
Two new benches and labor of starting the school .....	\$146 64	
Estimated cost of one old bench .....	50 00	
		196 64
Purchase of new tools .....	120 48	
Estimated cost of old tools on hand when school was opened .....	161 90	
		282 38
Janitor of Dwight School .....		15 75
Total .....		711 95

HENRY S. GREW,  
*Treasurer Boston Industrial School Association.*

JUNE 1, 1882.

The following communication addressed to the members of the Department of Superintendence by Charles G. Leland, esq., in reference to industrial education in Philadelphia, and containing information supplemental to the Circular of Information of the Bureau of Education, No. 4, 1882, was read:

Regretting that I cannot be present at the teachers' convention, I take the liberty of making by letter a few remarks on industrial art as a branch of education in schools and on the success of the experiment as conducted in Philadelphia.

I must premise that the system of which I speak is different from that pursued by the industrial schools. Properly speaking it occupies the time between the Kindergarten and the industrial school. The latter is specially adapted to boys and to technological or mechanical studies. A high authority in such schools has declared that their instruction was not suited to even boys of less than 14 years of age. This is nothing to the discredit of the schools. A university is not an infant school. Again, the industrial school requires a building and a fortune to establish it. It can only be carried on in a city. The Philadelphia system of industrial art teaching attempts, first, to find out what kinds of manual labor are really adapted to all boys and girls whatever, especially to those under 14 years of age, and, secondly, whether it be possible to introduce some method of teaching them in all schools, in families, and to individuals.

Extensive travel and earnest study of this subject during many years taught me that, while children cannot learn mechanical trades without detriment to mental studies or health, they can easily acquire the minor or decorative arts, including that of decorative design, which is the basis of them all. I have never found in any country that girls or weak or very young boys could with "humanity" be set at shoemaking, weaving, or factory work; but they can all learn outline design and modelling in clay in a few weeks or months, and this to a degree that would astonish even an artist who did not know of what children are capable. They can also carve wood, embroider, work in leather, and emboss sheet brass. That all of this can be well done by pupils only ten years of age is being shown to all who choose to visit my Philadelphia school.

It has been strongly urged against this system that it teaches only art and "fancy work," that it is therefore useless, and above all that what *boys* want is a good practical education by which they may make a living. Now this is very true. Boys *do* need a practical education. But to teach an average girl or boy of ten or eleven or even twelve years a *trade* is impracticable and visionary. The practical men had the experiment all to themselves in their own way for many years in Pennsylvania, as in other places, long before they were troubled with visions of art, but they did not succeed with the little ones. If it had been possible this whole world of ours would have become like many of the factories of New England at the present day, a hell of hard labor for infants of eight and even six years of age. But in India and China, where human life is so cheap, although children are made profitable at art work, they cannot be profitably employed at *trades*.

I have conducted this experiment without making a cent by it, for the purpose of testing human capacity. I have learned by it that, as the flower prepares the fruit, art work in children is a proper preparation for more practical callings. Outline design and modelling qualify children to become useful in all factories where any kind of casting or shaping anything to graceful forms is required. Easy embroidery leads little girls to the far more difficult art of good plain sewing. Wood carving naturally includes the elementary work of carpenters and joiners. Sheet brass embossing, little known as yet and first made known to amateurs both in England and in this country by my manual on the subject, calls forth or develops both the power of design and of mechanical execution to a really remarkable degree. A more important subject, to which I have paid particular attention, is the fact that the study of design and artistic hand work develops in all children intellectual powers of every kind. Given two boys of equal mental power, and let one study the three R's alone, while the other at the same time learns to design and model, and it will be found at the end of, say, two years that the latter will in all respects be by far the cleverer of the two. And it could not be otherwise. When the curiosity and interest of a boy are awakened in art he begins to observe the design in every shop window, in every piece of furniture, in every wall paper. He has entered a new world. In a few weeks the boy can tell you if a lace pattern or a sofa cover is correctly designed (I am sorry to say that in most cases he can tell you that it is *not*), and give reasons for it. Is not this intellectual development? Is it not a practical preparation for a great deal of business? Would it spoil a boy for selling lace, dry goods, wall papers, or furniture? Would he know less about metal work? Would not, on the contrary, the knowing how to design patterns be through life of real use to him in manufacturing or selling almost any kind of fabrics?

I have no pupils who receive from me and my assistants more than seventy hours of instruction during the year. In this time they learn to design fairly well, and with design learn one or two other minor arts.

That this is actually done is proved by the results. Those who will may visit the school, see the pupils at work, and examine the results. Very recently, since I have been able to engage teachers for wood carving and sheet brass embossing, there has been a great improvement in the work.

If I am asked what boys and girls can learn while attending school and without adding to the burden of the crowded course of studies, I reply, outline design according to a very simple elementary method founded by myself on principles long known to such teachers as Owen Jones, and that when this is learned there is very little trouble experienced in wood carving, modelling brass, embroidery, sheet leather work, setting mosaics, working in papier mâché or any other plastic substance. As regards finding *time* for this, there is not a school child in Philadelphia who would not gladly keep up his or her average in other studies to be allowed to come to the Public Industrial Art School.

I consider it as proved from my own observation that design and art work stimulate quickness of perception and awaken interest in all culture. If there are any present who have not investigated the subject, I commend to them the perusal of the pamphlet on Industrial Art in Schools, published as Circular No. 4, 1882, by the Bureau of Education, Washington, under authority of the Commissioner, General John Eaton, who is familiar with the school and knows what the pupils have done. I must in this connection express my regret that I was unable to have made betimes certain specimens of our art work for exhibition at this meeting.

Of this pamphlet I may be allowed to state that it attempts to set forth clearly and practically how any person whatever may learn the principles of decorative design with the aid of an elementary manual, and that while thus learning one may also teach them to a class. When this is done any of the minor arts presents no difficulty. The interest which the pamphlet has awakened in every corner of the Union is shown by the great number of letters I have received from persons interested in education informing me that they intend to test the Philadelphia system in schools or families.

What I have ventured to characterize as the Philadelphia system is the theory that decorative art work is better suited than mechanical work for boys and girls under 14 years of age, but that the artistic shall be so taught as to lead on to the mechanical or to technology. This art work is to be taught according to a simplified system of design, in which free hand drawing from the shoulder is combined with the most mechanical aids and appliances. In this system original design is taught from the first lesson. It is in full operation and has been perfectly tested, not only in the Public Industrial Art School, but also in the Ladies' Art Club of Philadelphia, of which I am president. In the school I have 150 pupils, soon to be increased to 300; in the club I have 200 grown-up

scholars. The same system of minor instruction is also pursued in both institutions.

I cannot conclude this brief communication without expressing my gratification at observing how much is being done for education at present—wisely, efficiently, and nobly—without much appreciation or aid from either the public or its exponent, the press. Twenty columns of politics, half of them the politics of the slums and groggeries, or little better, may be found in many newspapers to one on education. It is in the hands of the teachers that the souls, the intellectual lives of all the coming generation, are placed. The teacher should be the highest, the most honored in the land. He was actually so in early days, when the priest and teacher were one. But there is a time coming, and that soon—I put the prophecy on record—when education will enter into our national politics, and when candidates shall be measured, not by the blind and brutal tests of mere faction, but by their views as to how to advance culture, to promote honesty, to train the young, and to keep training and teaching man at every age. The best patriot is the man who will do most to bring this about.

In the discussion which followed the reading of these reports, Mr. MARBLE said :

I wish to make a remark upon a certain phrase in this excellent paper from Mr. Leland, where evidently the author's rhetoric ran away with his logic or truthfulness. He speaks of New England factories as hells of hard work and labor for children six or eight years of age. Now, I mistrust that the latest information which the writer has may have been obtained from some inaugural address where education may have been mixed up with politics. I would call attention to the law which forbids the employment of any children under the age of ten years. Furthermore, I wish to say that I cannot see why the teaching of industrial drawing should be claimed as the "Philadelphia system," when it has been practised for about a dozen years in many cities, and in substantially the same way.

Dr. WARREN thought that the law might sometimes be broken in reference to the employment of children under ten. He supposed Mr. Leland meant by "Philadelphia system" a combination of various things which others have taught singly.

Dr. TAPPAN wished to inquire as to what branches should precede instruction in decorative art and mechanics.

Mr. RICHARDS thought the writers of the reports read had a correct idea as to what should precede industrial training. Decorative training, he said, should begin with the child as he begins his alphabet and should be continued until he is fitted for some specific employment in life.

He said: It is not a necessity that the child should be trained to a trade in school, and whether I would carry it as far as they do in the Boston schools, I am seriously in doubt. I would, however, have arrangements

so made that every child should understand the language of the arts of common life. I believe the time is coming when there will be an industrial department in every well organized system of public schools. The employment of the intellectual training should alternate with the physical training. I would not train a child to become a carpenter or shoemaker, but I would make him familiar with the language of these employments.

Mr. MAYO declared that all he had ever heard in regard to industrial training had been in connection with city schools. The experiment in Boston cost \$20 for each scholar. Now, can any gentleman tell us of any experiment that amounts to anything that has ever been tried in the ordinary country district school? Is this thing practicable?

Mr. MARBLE replied that this question was like that asked by the colored man, who, when told that God made man in his own image and stood him up against the fence to dry, inquired, "Who made that fence?" This question overthrows the whole system of industrial education. Mr. Marble expressed himself as anxiously looking for light on industrial training. He deprecated the idea that the schools are responsible for the after life of the pupils. The parents ought to bear some of the responsibility.

Mr. PICKETT thought that education meant the harmonious development of head and heart and hand. It is impracticable to carry out the work of industrial education, even in city schools; in country schools it is entirely impossible. The school, in his opinion, is assuming too much; it is taking too large a share of the responsibility of the parents.

Mr. RICHARDS understood that it was the part of the school to do what could not be done by the parents. A revolution of normal schools is what is needed.

Mr. JONES stated that the Pennsylvania Railroad Company in hiring a boy wished to know whether he was a good *mechanic*. The railroad company understands its business; the world needs *mechanics*, not mere workmen.

#### THE EDUCATIONAL LESSONS OF THE CENSUS.

WM. T. HARRIS, LL. D., of Concord, Mass., then read the following paper:

It was my task on a former occasion to lay before this honored association of school superintendents some suggestions as to the educational uses of the census, and also the need of some changes in the schedules of the existing census tables. For the purpose of studying political and national affairs we found that the items regarding race, nativity, military age, voting age, and total population were most important. For the purpose of studying the social condition of the people we had the items of wealth and pauperism, sex and ages by nationalities, occupations, deaths, diseases, public indebtedness, crops, machines, produc-

tious, months of birth of the population, also items relating to the insane, deaf, blind, and other unfortunates.

For the study of education we had the items of schools and teachers, illiteracy, pupils, libraries, newspapers and periodicals, churches, the number of children of school age and their enrolment and actual attendance on the schools. The immense improvement in the methods of preparing the national census for 1870 led us to hope that the same enlightened supervision after ten years of experience would produce even better results, if the recommendations and arrangements of the director of the census were seconded and supported by Congress.

In so far as the results of this new census for 1880 have been given to the public, our anticipations have been fully realized. It is only to be regretted that an unwise reduction of the corps of laborers engaged in tabulating the results of this census has kept back from the people for so long a period the full use of the results of this most reliable and minute of all our national censuses.

It is unnecessary to speak at length of the importance of self knowledge on the part of the individual or on the part of society or the state. It is evident that the wise direction of the state depends on a statesmanship that possesses accurate knowledge of the social condition of its people and understands the measures necessary to "promote the general prosperity and secure the blessings of freedom."

Social reform, too, is conditioned by accurate knowledge of the statistics of production and consumption, or of uses and abuses, evils and benefits, that may be itemized in the economy of the community.

From our point of view as educators, nearly every item in the census has a significance because acting or reacting on the people as an educational influence.

Let us look for one moment at the most general item, that of the aggregate population of the country—fifty millions and more. Ten years previous it had been less than forty millions and twenty years previous it had been about thirty millions.

We all know that there is a subtle and unobserved educational influence proceeding from the consciousness of nationality. To belong to a weak and despised nation is to submit to a perpetual training in humility and loss of self respect. A great blight settles down on the character of the individual like a foul, mephitic vapor, and prevents healthy growth. It was great to be a Roman citizen in the times of the Cæsars. It meant that the individual walked about clothed with an invisible garment of protection. The might of the greatest nation, the conqueror of the world, shielded its humblest citizen.

In modern times what a well-spring of character to the man is the consciousness that he is an Englishman. Eight hundred years of victorious national growth strengthen the backbone of each Briton. To belong to the nation whose flag is saluted by a perpetual morning sun

around the world is an education in self respect, manliness, honor, virtue, and productive activity hardly to be estimated.

Up to 1860 the United States had not reached the standard of a first class power among nations. Each of the "five great powers" in Europe was larger. Our civil war came just then, and it seemed to all Europe, to our friends as well as our enemies, that our doom had come and that no constitution like our own could survive civil war. Before we had come to be respected for our national might, we were to be divided and rendered less and less formidable.

When, in 1870, we reached thirty-eight millions of people, after emerging from a decade one-half of which was occupied with destructive civil war, burdened with an enormous debt and still more by the uncertainty of the problem of reconstruction, our aspect was still too problematic to secure for us a recognition among the statesmen and historians in Europe. As a nation we are affected by foreign opinion perhaps less than other countries because of our distance and because of our consciousness of having a special national function and destiny different from those of European states. But the recognition that has begun to be accorded us by the nations abroad will awaken a new regard for foreign opinion and prove a great educative influence on us through the increased intercommunication by travellers, by commerce, and especially by literature, which describes our national manners as seen from the point of view of England, or France, or Germany.

In a peculiar sense this is the age of the newspaper, and every morning each man and woman living in a civilized community is supposed to take a bird's-eye view of his whole country, and, more than this, of the whole world that is reached by the telegraph. The nations that are far down in the scale of progressive humanity are coming to the gaze of the civilized world as a totality. The most wonderful thing is that they are also coming to feel the influence of public opinion.

The veil of distance has been lifted and each people finds itself playing its part on the open stage before the world as spectator. It cannot do what it will, but it must do what alone will be permitted by the opinion of the world that looks on.

This is national education in the largest sense, for it is the education of whole nations of people by whole nations of people.

In this sense the American people are entering upon an era of national education, in which the decennial census forms a very important agent.

With the growth to fifty millions the United States for the first time rises distinctly above the national horizon as a great world power. The rate of increase will give sixty-five to seventy millions in 1890 and ninety to one hundred millions in 1900. We cannot easily realize the meaning of these census figures. Their chief significance lies in the new career that opens up to our people as a world power instead of a local power limited to this hemisphere. Our most adventurous Fourth of July

orators have not been able to paint for us the national feeling that will be developed through our recognition in Europe. It is the English thinkers who have first seen the coming influence of the United States and of other English speaking peoples on this planet.

Startled by the phenomena of the decade of 1860-1870 they have come to study America seriously and more seriously. They have seen a gigantic war lasting nearly five years in a republic where the central power seemed a shadow and the local power everything; after an unparalleled display of centralized strength, the restoration of local self government complete; spurious reconstruction followed by genuine reconstruction; a new South rising out of the old, not like some fabulous phoenix, but with the more real agencies of the steam engine, the railroad, the telegraph, and the powers of productive industry, and fortifying its new social position by means of the school, making greater efforts than any country ever made before in this matter of schools. The European spectator sees an enormous debt funded and refunded and constantly decreasing, not by repudiation but by constant payment in specie. He sees the volume of paper money contracted and the resumption of specie payments. He sees the wonderful presidential settlement of "eight to seven," and the coolness and patience of the American people under established legal forms. Then he looks again at an increase of twelve millions in ten years, reaching an aggregate of fifty millions of people, the next nation to Russia in point of population, and all these people speaking English and living under a modified British constitution that realizes local self government here far more perfectly than it is realized in England itself.

No wonder that the far-seeing thinkers of Great Britain are looking forward and casting up accounts, anticipating our census and calling the attention of their young men representing the aristocracy and wealth of the island to the meaning of the growth of British colonization in America. Napoleon's career at the beginning of the century and Bismarck's towards the close of it, says a university professor, will seem very insignificant to the historian who looks back from the next century and calls attention to the quiet, unnoticed growth of the United States in the first half of this.

He sees that our nation may then have three hundred millions of people, as many as all Europe, perhaps. We have a government in the form of local self government that allows the individual to manage all affairs that concern himself alone, but insists that he shall constitute with his neighbors a joint directorship over affairs that are common to them. His will must submit to the general will in all matters of common weal. The numerous steps and stages—the school district, the township, the county, the State, the nation—ascend from the individual to the political summit.

This means freedom to all and to each. Those who are really concerned in the business manage it, whether it be single individuals or



small communities or large communities. Hence, while Europe sees American influence rising above the horizon as a world power, this does not forebode evil, as the increase of Russian power portends an invasion of her neighbors by the Cossack. Even England and France might become parts of the United States and preserve all control of what concerns only themselves. And as for common interests between nations, do we not see and do they not see that the day will soon come when such interests must and will be managed by international commissions?

This is the interest of our census in its most obvious feature: its interest first to us and secondly to the world and thirdly to us again because it interests the world. It is the education it brings to each and every American who lives in the consciousness of this mighty destiny before the whole world. It is a training in dignity, self control, humanity, earnestness, simplicity. You could tell a Roman of the empire by this; so a Briton of the present; so a Spaniard of the time of Charles V; so a Frenchman of the time of Napoleon; so a Prussian of the Bismarck régime.

Three-fourths of a million immigrants come here annually. A better educated class come here than formerly. The facts of our census arouse the attention of the more intelligent inhabitants of Europe and induce them, to try their fortune with us.

Turning from these considerations of the educational influence of the growth of the nation as a nation, let us contemplate for a moment the side of civil society, and recount to ourselves the meaning of the enormous sum of the productive industry of the country. The production of wealth appears to be the absorbing occupation of our people. Comparatively few seek the fields of scholarship or the fine arts or statesmanship. The growth of great corporations demands the most and the best of the great directive power that is developed here. Let us study for a moment this creation of property and the relation of its acquirement and preservation to education and the higher spiritual life of man.

It is clear that all the bodily wants of man, food, clothing, and shelter, depending as they do upon the ownership of property for their satisfaction, are through this means elevated and spiritualized, because property is a result of the institution of society. For property is not the creation of the individual; mere possession does not suffice; it is the recognition of society that makes *things* become *property*. Civil society establishes rights of property and division of labor. Through this each man is required to labor for his fellow men and to depend upon their labor to supply him the articles of food, clothing, and shelter which his own labor does not produce. His bodily wants are no longer mere immediate impulses, as animal wants, but they are converted into the instruments of realizing his spiritual or reflected being; he is forced by hunger and cold to combine with his fellow men and to form a community in which he is to respect their recognition far more than his own animal impulses and desires.

Thus, too, the institution of the family lifts man above mere sexual passion, and makes him in that respect a reflected being, a rational being.

- Civil society is organized for the realization of man's existence as a property owner, so that he shall be a universal or rational essence, and not a mere individual animal, dependent on his mere locality and the season of the year and his unaided might for his physical life. For when man becomes a property owner and enters into this social combination of productive industry he does not lose himself but rather finds himself. He adds to himself the gigantic system of the industry of the whole world just as really as if he were absolute monarch over it and all mankind stood ready to fetch and carry at his bidding. Indeed the reality is more wonderful than the story as told in the Arabian Nights. The conception of Aladdin and his wonderful lamp, of Houssain and his magic carpet, and of Ali with his magic tube was the first dream of the wonderful organization of mankind into civil society. By its potency the humblest individual lives in communication with all the rest of mankind. The products of their labor are coming to him in a constantly flowing stream from the ends of the earth; he is in constant communication with all mankind and hears of their deeds, their joys, and their sorrows, and cannot but profit by this communication and grow wiser by what he reads in his daily newspaper. The institution of private property made transferable and exchangeable by means of the device called money makes each man a central focus of dominion:

For him the winds do blow,  
The earth doth rest, heaven move, and fountains flow.  
Nothing he sees but means his good,  
As his delight or as his treasure;  
The whole is either his cupboard of food  
Or cabinet of pleasure.

Each man, by the simple process of industry and becoming a producer, puts into the market and storehouse of productive industry his little mite of a day's labor and thus gains the right to draw out from that market a portion of each of the products that all the countries of the world have contributed to it.

Note, especially, that the contribution of each bears no proportion to the blessing that he receives in return. As Aladdin had to rub his lamp in order to call up its genius, the slave of the lamp, so, too, the lamp of human industry must be kept bright by the toil of the individual, and then all is provided.

The service performed by the combined labors of all men is a service infinitely more considerate and thoughtful than the service of the slave of the lamp or the slave of the ring, in the Arabian tale. That service did only what was desired and commanded by the individual Aladdin; but the service of the industry of the world does ten thousand things

for his true good and his possible wants that the individual cannot think of or understand.

The individual needs to be educated in order to learn to perceive what servants wait on him and what priceless gifts stand ready for his hand.

This is the miracle, that the whole of society is the slave of the ring that serves each individual. For is not social combination in a world of productive industry and commerce a gigantic ring of human beings? And does not each single individual in that ring find that he is enriched by all the labors of all the human beings in that ring, so far as those labors are labors of production and exchange?

Through civil society each individual commands by his own feeble efforts the resources of the entire globe. The organization of civil society is so perfect that every day's labor of the wheat grower affects the price of wheat all over the world. Every day's labor in the mills of Lowell or Lawrence affects the price of cotton cloth in Australia. The day laborer in the streets of this city commands with his meagre wages to that extent a share in the coffee of the distant Indies, the sugar of Louisiana, the tea of China, the drugs of South America, the fruits and grains, the manufactures from all sections of the country.

The fact that conscious intelligence—directive power—controls the property of the world is too obvious to need restatement. I call property a "reflected being" because it exists only through the recognition of society. *Things* exist, it is true, without such recognition, but things do not become *property* until society confirms the right of ownership. Such recognition is always an act of directive intelligence. There are no rights of property where the possession and use of things depend on the will of the strongest individual. Rights of property arise only with the growth of insight into the supremacy of the social whole as organized in the state. Man must see that society is stronger than the individual and learn to obey the will of this invisible body and to renounce the temptation to substitute his might for right before property can really come to exist in a community. The laws that create and preserve property state the nature or constitution of the bonds that hold society together. They state the principles on which man shall contribute to his fellow men and be permitted to share in their labors. Such distinctions as the laws of property set up contravene the immediate desires and wishes of the individual and demand of him the constant effort of self control. He must acquire a reflected will, that is to say, a will that is bent back upon itself in order to regulate its own action according to universal principles called "laws."

A thing is an immediate existence; but a piece of property is a thing that has become subject to my will through the recognition of society. Society acknowledges and respects the sway of my will over those things that constitute my property. Hence property is not a thing nor a direct product of my will, but the product of my will only as reflected

in the will of the social whole existing in the form of a political body, the state.

It is clear enough that the rights of property cannot exist except in a community whose directive power has adopted a code of laws and legal usages defining such rights of property, and only where there exists a class of the community specially educated to interpret the application of those laws to particular instances and enforce their application on the part of the state or guide the individual by professional legal advice. It demands, too, the education of the law making power. Under all there must be the generally diffused insight of the people into the necessity of the support of the power of the social whole against the might of particular individuals or classes of individuals.

This insight into the necessity of the political organization of society is an insight that belongs to what I call "directive intelligence," because it can be realized only through the control and direction of the mere individual will, requiring it to renounce its inclinations, wishes, and whims so far as they are not compatible with the existence of social combination. The rights of property can be conserved only through an educated class.

The higher kinds of property, such as franchises, imply a high intelligence in the community. The property that consists in franchises requires a more thoroughly educated community, because such rights rest on more subtle distinctions than the rights to chattels and real estate. The individual must be so disciplined in mind that he can see readily the connection of his own well-being with the existence of such franchises.

Again, the possibility of possession of property by all in this country adds new validity to it here and makes it more valuable. That you can alienate your real estate, makes it property in a complete sense. If it is entailed it is only part property. The free possession of property, without feudal liens and tenures (the dead hands of the past owners still clutching the symbol of their reflected being), comes to existence only when a government of all the people, for all the people, and by all the people prevails, and when it is rendered possible through universal education. Who would own real estate in Turkey? Who would accept a Russian estate on condition that he live on it and assume its responsibilities? No one of us, I think. The quality of property—its intrinsic value—depends upon the quality of the community who recognize it. The status of the reflected being is the status of those who reflect it. Property in a refined and cultivated community is raised to a high potency of value; in a barbarous community it is not worth the risks incidental to its possession. In proportion as a man is educated he sees the substantial character of reflected existence, and this perception creates continually new subjects of property, founded on new recognition: bodiless possessions, "incorporeal hereditaments," that receive their substance from conventional recognition.

The growth of corporations is the wonder of this generation. They perform what the individual never could do for himself, and yet needs to have done in order that he may become freed from the thralldom of nature. The individual could not afford to build an aqueduct to obtain pure water from the distant hills, or establish gas works, or own a railroad or a telegraph or express system. Corporations furnish him all these things. If corporations abuse their power sometimes, this is because society has not yet learned where to place legal restrictions upon them and is another illustration of the necessity of education in the community.

This general relation of education to wealth production brings us close to the question of so-called industrial schools: manual training schools, school shops, and the like. It is clear enough that such schools are in demand and have a legitimate function to perform. But it is not so clear that they should be incorporated with common school education or in any way encroach on the time-honored disciplines of the common school, i. e., reading, writing, arithmetic, geography, grammar, &c., or indeed take the place of anything that can be called general instruction.

Let us see what the census teaches us in regard to the proportions of the population engaged in the particular arts and trades. We shall then see whether such industrial instruction can be made general enough to answer the future needs of any considerable fraction of the pupils in school.

If each of the five hundred arts, trades, or occupations in the community required a special school for the preparation of its laborers and had no manual and technical disciplines in common with the other occupations it is clear enough that such special industrial education could not be introduced into the common schools.

I have selected for this investigation nine cities differing greatly in respect of manufactures, commerce, and professional and personal service. They are New York, Philadelphia, Brooklyn, Chicago, Boston, St. Louis, Cincinnati, New Orleans, and Baltimore.

It is evident that the inhabitants of cities will present us a larger proportion of laborers at the arts and trades than the country population. In the cities, if anywhere, it would be desirable to establish industrial education in the common schools.

According to the census of this country for 1870—I use the statistics of 1870 because the returns are complete—there were 350,556 persons above the age of ten years in the city of New York who were reported as laboring in some occupation. Of these 86,171 are reported as females. Of the entire number there were 1,401 engaged in agriculture and 115,259 in professional and personal services, the last being one-third. Personal services included 49,440 as domestic servants, 28,451 as mere laborers, 4,832 as in hotels and restaurants, 5,604 in laundries, 1,278 in livery stables, 1,535 in boarding houses, 2,549 barbers and hair-dressers, 42 billiard saloon keepers—93,731 in all. Professional services included

715 clergymen, 316 journalists, 1,283 lawyers, 4,222 in Government offices, 1,741 physicians and surgeons, 669 soldiers, 3,511 teachers—12,457 in all. There were 9,071 others engaged in personal or professional services not specifically designated.

When we consider the various occupations named above, under which one-third of all the laboring population of New York are classified, we see that there could be no special training school added to the common schools that would fit each pupil for his particular vocation, if one of these.

By far the largest number in any single occupation are classed as domestic servants, and these form one-seventh part of the entire number of laborers.

The general discipline of the hand and eye that is given in the study of free hand drawing in our common schools would be of great service to nine-tenths of these laborers. Still more valuable would be to all the training of the Kindergarten occupations at the early age when the muscles are not yet formed and fixed. The one occupation of moulding from clay would be useful to all cooks and to all who have to do with giving shape to plastic material.

The census reported 88,611 as engaged in trade and transportation, one-fourth of all the laborers. Of these, 23,872 were traders and dealers, 4,744 were hucksters, pedlers, &c., 27,590 were clerks, salesmen, &c., 3,355 were bankers, brokers, insurance men, &c.—59,561 total in trade. Of those in transportation, 3,844 were engaged by railroads and express companies, 298 by telegraph companies, 4,463 were sailors, &c., 9,813 draymen, teamsters, &c.—18,418 in all. Of those engaged in trade and transportation, 10,632 were not more specifically classified.

Here, too, we see that the general industrial education fitted for all is a knowledge of arithmetic, reading, and writing, and not some species of manual skill.

The number engaged in professional and personal services, added to those engaged in trade and transportation, gives us nearly three-fifths of the whole industrial population of New York. The number engaged in manufacturing and the arts is reported at 145,285, or the remaining two-fifths of the industrial population. Of these, 3,533 were blacksmiths, 2,296 were iron and steel workers, 3,787 were machinists, 1,562 were tinnerns. Here we see 11,178 whose occupations have something in common, namely, the working with iron and steel or hardware in some shape. The use of the hammer and the file would be useful to all these; but they form only three in one hundred of the entire industrial population. In a school of one thousand they would make a class of thirty-two pupils. If more than thirty-two pupils were attracted into this class from a school of a thousand, it would be likely to produce discontented laborers, who were not needed because their trade was overstocked with workmen.

Taking another general class of manufacturing we find 10,427 carpen-

ters, 5,071 cabinet makers, 686 carriage makers, 1,606 coopers—17,790 workers in wood. The use of the file would not be specially useful to these. The use of the hammer would be necessary to all, but a very different knack in its use would be required. The use of the hammer on iron and steel would be likely to specially unfit one for the best use of it on wood. But these woodworkers could all learn the use of wood cutting tools: the saw, the adze, the chisel, &c. But a class of only fifty could be formed in a school of one thousand pupils, even if the whole school were destined to some industrial occupation.

Next we find 1,477 cotton and woollen mill operatives, 9,747 milliners, 18,564 tailors, 29,788 who should know something about the manufacture of cloth and most of whom should know how to sew. About 75 in a school of 1,000 would enter a class that should know the specialties of the tailor and milliner. Probably 500 of such a school should know how to sew. We find 6,960 shoemakers, 3,855 bakers, 4,870 butchers, 5,824 painters, 8,018 masons and plasterers. The common element of skill among these trades is a very general one, such as we call discipline of the hand to delicate manipulation and of the eye to accuracy of measurement. Such training is given in the study of freehand drawing and in the so-called "gifts and occupations" of the Kindergarten.

In the other eight cities the proportion of the industrial population engaged in professional and personal services ranges from a little less than one-third, as in Philadelphia, to nearly one-half, as in New Orleans. The population engaged in trade and transportation ranges from less than one-fifth in Philadelphia to more than one-fourth in Chicago. In manufactures, arts, and trades the number ranges from one-fourth in New Orleans to one-half in Philadelphia.

These exhibits show from 30 to 40 per cent. of the population counted as industrial population. The population over ten years of age is about 75 per cent. of the whole population.

These lessons show us how wild are the theories of those who declaim against the present course of study in the common schools and demand the introduction of the arts and trades instead of the general disciplines that are now taught.

To meet the wants of the age, as these reformers understand them, they should ask for the curtailment of the school period and the apprenticeship of children to trades. Such apprenticeship is not likely to be undertaken by the state so long as the present ideas of personal freedom prevail in this country.

That the state may require a general education in science and letters and a training in secular morality is reasonable enough, but it cannot choose the vocation of the citizen for him without attempting more than any state has done since the petty tyrannies of India ceased to exist.

Special industrial schools may be established at the expense of the state, such as are called school shops and polytechnic schools, and doubtless they will do much good.

They will prepare a set of master workmen who will be able not only to direct the labor of the journeymen mechanics, but also teach them the best methods of manipulation. Such superintendent workmen will be doubly valuable to the community: first, securing better work; secondly, educating the workmen.

Within the past twenty-five years great strides have been taken by European governments in establishing systems of public education. It has been seen clearly that unless the laborer were educated the industrial product would be inferior and come to be discriminated against in the markets of the world. Technical education thus began at South Kensington for England, as it had been before established in France and Germany. The foresight of Frederick the Great, backed by the religious dogmas of Luther, secured general education to his people. The weight of the Prussian people in war came to be seen in their Austrian and French campaigns. Since these wars public education has received an enormous impulse. Not merely the industrial success of the people, but national independence itself seems dependent on the general education of the people.

But man will not submit to be educated simply as a director of machines and instrumentalities of industry. He soon aspires to direct himself and be self governed. To be sure there is a long step from the mere hand laborer, the one who turns a crank or carries a hod, the galley slave who works chained to his oar—there is a long step from the mere physical laborer to the director of a machine, to the engineer, to the overseer of a loom, or the manager of a telegraph. The former is all hands; his own brain even is a mere hand governed by the brain of another, who directs him. But when directive power develops so far as to direct and govern machine labor, nay, even when it is so far cultured as to reach the principles of natural science and to be capable of applying these in mechanic inventions, even then it is not at its summit of realization. It will stop at nothing short of the spiritual culture that makes it alike directive and governing in the sphere of mind, the realm of social, moral, and intellectual existence.

It is agreed that this age is one of productive industry. Its active principle is invention, especially mechanic invention. Every day we hear of some new discovery that harnesses a new force of nature and compels it to work for man and assist in providing means of food, clothing, and shelter, or means of intercommunication and the spread of knowledge. Mind, not the body, is the inventive power; the directive power that can manage and use machines to advantage is mental, and not physical skill. The growth of invention is so rapid that the increase of manufacturing power by the aid of machinery is said to double, for all the world, once in seven years. The multiplication of steam engines and the improvement of machines renders this possible. What unintelligent hand labor is there that has any certainty of being in demand ten years hence? More than this, what trade is there that can count



on using, ten years hence, just the kind of technical skill that it requires now?

The history of the present era of industries shows a continual shifting of vocations, no vocation having any long lease of life. The new discovery will make the trade learned to-day, after a long and tedious apprenticeship, useless to-morrow. Any peculiar knack which depends on manual dexterity may be rendered valueless by a new application of machinery. The practical education, therefore, is not an education of the hand to skill, but of the brain to directive intelligence. The educated man can learn to direct a new machine in three weeks, while it requires three years to learn a new manual trade. The hand trained for twenty years at one kind of labor cannot learn a new work requiring different skill, because the muscles have become set and stiffened into one form of action. An uneducated workman will be thrown aside to perish in an almshouse. Only the versatile intelligence is able to meet the demands of the age of productive industry.

We are to find the most practical education for our age, then, in the general education that is and has been furnished in our schools. The branches of the course of study include language studies and studies of nature with a view to fit the pupil for combination with his fellow men and for ability to command the forces of nature. Mathematics gives the individual man control over nature, and the study of reading and writing gives him access to the wisdom of the race and ability to communicate himself to his fellow men and receive their advice. These general studies are, moreover, essential in our day to the preparation of citizens who shall support and defend the established order and not conspire for its overthrow.

All the studies of the common school are conservative in their character, because they all open the windows of the soul and give the mind insight into the substantial character of the institutions of civilization. They all tend to produce the conviction that the well-being of man is best furthered through the very instrumentalities that have been discovered and elaborated by the race, and especially by modern civilization. Reading, writing, arithmetic, geography, history, and grammar all open the soul to light on the question of subduing nature or on the question of the character and destiny of the human mind as revealed in language or social usages or political forms and changes.

The good school, moreover, teaches industry effectually. But its industry is that of directive intelligence. The progress of civilization supplies more and more the machinery to perform menial service and makes it necessary to educate all into directive intelligence. Self-directive intelligence makes for itself avenues of employment. Directive power is the only power that is never wasted.

It is not surprising that our people educated in common schools are versatile and industrious. Indeed it is the most valid criticism that we hear, the general criticism that the American people overwork. Their

ever active intelligence sees too many opportunities in the presence of this half-settled and half-civilized New World, and the consequence is premature old age on account of an unbroken career of toil.

There is too little leisure from the rough work of pioneering to produce finished scholarship. But education, as far as it goes, disciplines the mind and fits it to understand the complicated questions which it meets in a new political experiment. But there is not enough of this general education for the real needs of the age. Every citizen ought to be able to read and write and to know enough geography, grammar, and history to understand the daily newspaper. At least so much as this is essential to the voter in a free republic.

But here we come upon the most unpleasant and unwelcome data that our census furnishes. The census of our country for 1870 said: Of the population over ten years of age, 5,658,144 cannot write; 4,880,271 of these are native born and 777,873 are of foreign birth; 2,789,689 of these illiterates are colored. The total population of the nation over ten years of age was 28,228,945. Hence, 20 per cent. of the population over ten years of age could not write in 1870. In Massachusetts, even, there were 97,742 who could not write, 89,830 of these being of foreign birth and only 7,912 being natives. Eight thousand is a large number for a State like Massachusetts. Twenty-three thousand illiterates were in Boston.

The census of 1880 tells us again that there are 6,239,958 persons unable to write out of a total population of 36,761,607 persons of ten years of age and upwards.

We have permitted universal suffrage, and the Government is made by the majority. If we do not have universal education, we shall all suffer for it; for we are tethered to the lowest stratum of our population and must accept their influence in our politics. Nothing but education will ameliorate it.

The lover of his kind rejoices in the knowledge that here in America we have so organized our society that the welfare of the highest is connected indissolubly with that of the lowest, so that each and all must, in the main, see clearly that he is his brother's keeper and realize the solidarity of the social whole. Each man is what he is, not through himself alone, but by and through the reflection thrown back upon him from the social whole in which he lives and has his being. Under monarchies and despotisms the same fact is also true, but there is such a mirage created by the principle of caste that it cannot be seen clearly except by deep thinkers. Here it is visible, for the common laborer is also a voter and participates in making the laws of a free government.

The critics of our educational system are never done with telling us that its results are to make the rising generation discontented with its lot. As if this were a defect instead of the crowning glory of the system! What place is there in this age for a drone who is void of aspiration? To be like dumb driven cattle—this is not to be permitted

in a Christian civilization. Man is immortal and has an infinite destiny: this is the burden of Christian teaching. In consequence of this, Christian civilization strives towards the heavens; it subdues nature and makes natural forces toil for it and procure food, clothing, and shelter for the body. It continually turns out the drudge from his vocation, and says to him: "I do not want your mere bodily toil at any price; I must have brain labor joined to hand labor. I have machines made of wood and iron that can do such work as the like of you can, and at a far less price than you would call starvation wages. Up, then, and acquire directive intelligence, so that you may manage and direct this machine and other machines, for presently we shall need no more mere hand labor, but require all to be intelligent and directive."

As made in the image of God and as destined for His eternal kingdom, is it possible that any education that schools may give is too high for the position to which a human being is called to occupy in life? In view of the necessity for educated directive power in an age of productive industry in which the superintendence of machines is the chief industrial business, is a general education that gives one insight into nature and insight into the human mind too much? In a representative democracy, in which the laws that govern property and personal rights are made by the representatives elected by all the people, including the humblest citizens of the country, is any education too good for the people?

The American answer to this question is No!

Dr. HENRY RANDALL WAITE, having been called upon to speak, said:

Education is intended to fit men for success, not only as bread winners, but in the fulfilling of the parts assigned them in the economy of society as factors for the accomplishing of whatever in their places as component parts of the social organism their special aptitudes and inclinations best fit them for doing. The address to which we have just listened calls special attention to the truth that in order to succeed in the pursuits and callings of the individual, one of the chief essentials is a knowledge of the relations, one to another, of the facts bearing upon these pursuits and callings. In connection with the lessons deduced from statistics by Dr. Harris, I recall as pertinent the remark recently made to me by one of the most prominent and successful of Boston publishers, that he attributed his success to the efforts made throughout his business career to utilize the laws of nature by making them adjuncts for the accomplishment of his purposes. This successful attempt in the application of sound philosophy to the management of business affairs illustrates the results which may obtain in larger degree if the lessons deducible from facts bearing upon the affairs which concern men in all the important relations of life can be made more generally accessible and shall be more commonly studied. If, as indicated, the chief object which engages or ought to engage the atten-

tion of educators and students alike is the means which will most certainly enable men to grow into whatever place in the social organism they are, all things considered, best fitted to fill, education from its earliest beginnings should include proper attention to whatever will in any way cast light upon the various pathways open to the choice of the youth in our schools. It is the opportunity for the study of facts in their various relations as presented in statistical form which gives to statistics their chief value; and as facts thus collated enable us to arrive at conclusions which are shown to be of the utmost importance as affecting the future interests of the young, such facts may well be regarded as worthy of the most painstaking study. The results of such studies, as presented by Dr. Harris in his summary of some of the lessons taught by the figures of the last census, should therefore be especially welcomed because of their important educational influence. It may be too much to hope, and still we may indulge the expectation, that when the great value of such studies is more fully appreciated opportunities will be in some manner afforded to the youth in our schools for entering upon them. The natural laws which govern human affairs in respect of education will, in the near future, I trust, be as well classified and understood as those which relate to political economy. A study of these laws as applied to the important question of industrial training, which has been engaging our attention this morning, would cast much light upon that subject.

Industrial education seems to me to be merely the amplification and perfection of the system of object teaching. It takes from the latter that which was abstract and theoretical and gives to it, as applied to the useful arts, a practical bearing. When the question of such education is under discussion and we ask what part in it the artistic and decorative shall have as compared with manual labor of a grosser sort, it may be well to inquire as to the proper relations of the triune functions of man, the head, the hand, and the heart (so eloquently referred to by Mr. Pickett), the natural order of sequence in which these exercise their functions, and as to the relation which the various steps in industrial education bear to this sequence. If in the order of nature's laws we find that observation through the eye precedes the knowledge acquired by the sense of touch or hand manipulation, will not this aid us in the orderly arrangement of the various steps to be taken in industrial training? Again, by the careful study of the facts which acquaint us with the natural laws (to ignore or to disregard which will result in the failure of our best efforts), we may, I think, solve the two most important problems connected with this question in its practical bearings: first, under what circumstances industrial education may be profitably employed, and, secondly, circumstances being favorable, how to employ it to the best advantage.

It has been said that the methods contemplated by such a system cannot be made universally applicable. Assuredly, conditions in city



and country, as remarked, are so widely different as to make it evident that the rules applicable in the one case will be applied less easily or not at all in the other. A careful inquiry into these conditions should certainly precede attempts to introduce a system whose usefulness and value may be imperfectly appreciated and greatly underestimated as the result of hasty and unwarranted conclusions on the part of its friends. Statistics, generally regarded as a dry subject, and possessing little interest, in so far as their study can be made plainly contributory to the solution of the important social problems which are more and more engaging the attention of intelligent men, will receive the attention due them; and, as men turn more and more to the study of what we have been accustomed to hear spoken of as "dry figures" because they find that such studies pour floods of light upon the vital problems which chiefly concern them, figures will have a new meaning.

Mr. RICHARDS. I would like to ask Dr. Harris a question. Why is it that only one in fifty of the children that are in the courses of education in our country are in the higher grades?

Dr. HARRIS said in reply:

I believe, of course, that primary instruction may be improved, but I do not attribute the fact that there are so few in the higher grades to the want of good instruction in the lower grades, as Mr. Richards seems to do.

The average attendance on the school is perhaps not more than three years (of ten months each) all told, say thirty months' schooling, on an average, to all our people. The reasons for this are obvious enough. First, there is the poverty of the people, real or imaginary. The parents of the class of manual laborers are content if they give their children the ability to read and write and the mastery of the simplest rules of arithmetic. So much is "a great deal more than *they* received."

Then, secondly, there is the stimulant of opportunity in this country. What country was there ever before that offered such chances to the individual to get wealth? The youth catches the gold fever or the emigration fever, and quits the school for active labor.

It is not quite so bad as it seems, for the youth who can read and will read may become a learned man before old age, through the blessings of cheap books and periodicals, and above all the daily newspaper, which is our greatest popular educator next after the common school. The pupil learns how to read at school, and he graduates from that preparation into the American university: the newspaper and public library.

I find myself unexpectedly bringing my paper into the midst of a debate on industrial education. I would like to say on this point that the great fact that meets the student of modern civil society is the fact of the change of vocations rendered necessary by the invention of machines. No laborer can be very sure that his trade will be good for a livelihood for many years to come. This development of inventive

power is due beyond question to the study of natural science and the increased devotion of specialists to the observation of the phenomena of physical processes. This study of nature, again, if we are to follow up our explanation of the peculiarity of our historic period, must be considered as due to the development of the Christian idea of the world. So long as nature was looked upon as a mere illusory appearance or "maya," as the East Indians called it, there would not arise the conception of the possibility of finding rational laws in it. So, too, the conception of the Greek mind, that nature is the manifestation of individual divinities concealed behind it, would not permit the observer to entertain the thought that nature is a consistent manifestation of reason. But the Greek philosophers broke away from superstition and arrived at the idea of the world as a *Cosmos*, a world which, as Plato represented, was made by a Creator entirely without envy and moved only by the desire to impart to it all His perfections.

The Christian religion taught that the world was a revelation of God. Accordingly, as soon as the weightier questions of the struggle for existence against the northern and eastern barbarians were settled in its favor, there arose a wonderful passion for the study of nature in one or another form. At first it was the era of geographical discoveries, then the era of separation of the secular from the dominion of the church. In itself this separation of the state from the church is the proclamation that nature shall have validity as a peer to the spiritual whenever it assumes the form of harmony with it. The state has assumed the form of the dispenser of justice, and justice being a divine attribute it harmonizes with the principle of the church, and the state may become independent of it, inasmuch as it has adopted a principle recognized by the church and now no longer needs ecclesiastical supervision. The secular emancipation is brought about by the Christian principle which teaches the divinity of men and places infinite responsibility on the individual.

Science will emancipate man from thralldom to nature through mechanic invention. First, there came the age of simple inventions, clumsy machines being invented to perform the movements that the hand had executed in the previous era of division of labor. The age of machinery is the age of synthesis in place of division. After simple machines come those more complex, combining the operations of many simple machines in one. The more complex the machine the more versatile the intelligence required to direct and control it. But the emancipation of the human being is much the greater for it. The productivity is enormously increased in proportion as the human individual is dispensed with for its direction. Food, clothing, and shelter grow cheaper, and each human being can have more of them in exchange for his day's labor.

There are two consequences resulting from this progressive conquest of nature by the aid of mechanic invention. The first is that more educated general intelligence is demanded in the director of the machine.

The second is that the human being gets more and better food, clothing, and shelter, and more leisure for spiritual development, and consequently his child stays longer in school, for the reason that labor demands intellectual preparation and leisure permits such preparation.

Mr. RICHARDS said that more time was needed to educate youth in those higher branches that give directive power.

Mr. LUCKEY thought that the question why there are so few rich people and so many poor ones might be asked with equal propriety. All would be rich if they could and all would educate their children if that were possible. We do not understand this question of industrial education. The schools are managed by poor directors and controllers. Let the children be properly educated in the rudiments, and those who can take advantage of the high school education will do so. The chairman of a French commission remarked in my hearing that the best reading he had heard in his life was in public schools in America. "But of what use is it? In America you devote four times as many hours to teaching children to express themselves as we do, and of what use is it? Are you educating these children to go upon the stage or become lawyers or preachers? Oral expression is not what you want. You wish to teach children to read in order that they may gain information. If you will take 90 per cent. of the time that you give to expression and teach the pupils the meaning of words they will do better." Now, I have observed that children that come to us from England and Scotland and Ireland and Wales can read books that American children of the same age cannot comprehend.

Mr. HITZ concurred in the views expressed that the directive power should be developed, and Mr. Richards emphasized his previous remarks.

The president announced the following committee on national aid to education: M. A. Newell, State superintendent of public instruction, Maryland, chairman; B. G. Northrop, ex-secretary of the State board of education, Connecticut; Atticus G. Haygood, general agent of the John F. Slater fund, Georgia; N. C. Dougherty, superintendent of schools, Peoria, Ill.; J. H. Smart, ex-State superintendent of public instruction, Indiana; Jos. Desha Pickett, State superintendent of public instruction, Kentucky; Joseph White, ex-secretary of the State board of education, Massachusetts; W. T. Harris, St. Louis, Mo.; Andrew J. Rickoff, superintendent of schools, Yonkers, N. Y.; Eli T. Tappan, president of Kenyon College, Gambier, Ohio; Geo. J. Luckey, superintendent of schools, Pittsburgh, Pa.; C. C. Painter, Nashville, Tenn.; S. C. Armstrong, principal of the Normal and Agricultural Institute, Hampton, Va.; B. L. Butcher, State superintendent of free schools, West Virginia; B. G. Lovejoy, member of school board, Washington, D. C.

The department then adjourned to meet at 8 P. M.

## THIRD SESSION—WEDNESDAY EVENING.

WASHINGTON, *February 21*, 1883.

The third session of the Department was held in the High School Hall at 8 P. M.

The president introduced ATTICUS G. HAYGOOD, D. D., president of Emory College, Oxford, Ga., and general agent of the John F. Slater fund, who delivered the following address :

## IF UNIVERSAL SUFFRAGE, THEN UNIVERSAL EDUCATION.

The records in the Bureau of Education show that in the recent slave States of the Union the total school population in 1881 was 5,814,261. Of these 3,973,676 were white and 1,840,585 were colored children. The school age in these States averages from six to nineteen years. Of the whole number the total school enrolment was 3,034,896. Of this number there were of white children 2,232,337 ; of colored, 802,559. Of the total school population of 5,814,261, 2,779,365 were not enrolled, that is, they were not at school. The whites not enrolled numbered 1,741,339 ; the colored, 1,038,026 ; that is, nearly half the white population of school age and more than half the colored were not enrolled. Of the entire school population 52 per cent. were enrolled, 48 per cent. were not enrolled ; of the whites a fraction over 56 per cent. were enrolled, of the colored a fraction over 47 per cent. In this matter the whites are only a little better off than the negroes.

Upon the schooling of the 3,034,896 enrolled in 1881, these States expended the sum of \$13,359,784, that is, \$4.40 per capita. Of these States all but two or three distribute the school funds without distinction of races. In these States the public school term does not average four months ; in most of the cotton States the average term is three months. When we say that 3,034,896 children were enrolled in 1881 in the late slave States, this does not mean that so many were at school three months. It is doubtful if two-thirds of the whole number were at school during the full term.

Here, for convenience in remembering them, let us come to round numbers for a moment. Allowing for the ordinary increase of population since 1881, it is safe to say the school population of the South is now 6,000,000. Of these 4,000,000 are white and 2,000,000 are colored. Of the 6,000,000 about one-half are enrolled and at school.

What is the case with adults in these States ? We may just here consider only the case of the voters, there being, however, more illiterate women than men. The total number of men of voting age in these States, by the late census, is shown to be 4,154,125. Of these, 1,354,974 could neither read nor write, that is, nearly one-third of the whole number of voters are illiterate. Of the white vote 30 per cent. are illiterate ;



of the colored, 70 per cent. In one of these States the illiterate vote is the majority of the whole number.

This is bad enough, but this is far from being the worst of this sad case. The worst is this: The illiterate vote in these States is increasing. From 1870 to 1880 the increase of this army of ignorant voters in the South amounted to 187,671. Leaving out Delaware, the illiterate vote increased in every Southern State. In this downward progress the two races keep well together. The increase of the illiterate white vote was 93,279; of the illiterate negro vote, 94,392. The whites being in the majority, take the South as a whole, the increase of the illiterate vote is relatively greater among the negroes.

Let us give details as to a few of these States. In Georgia the illiterate white voters in 1870 were 21,899; in 1880, 28,571; the illiterate negro voters in Georgia in 1870 were 100,551; in 1880, 116,516. The illiterate white voters in Kentucky in 1870 were 43,826; in 1880, 54,956; the illiterate negro voters in Kentucky in 1870 were 37,889; in 1880, 43,177. In Tennessee, in 1870, the illiterate white voters were 37,713; in 1880, 46,948; the illiterate negro voters in Tennessee in 1870 were 55,938; in 1880, 58,601. In Texas, in 1870, the illiterate white voters were 17,505; in 1880, 33,085; the illiterate negro voters in Texas in 1870 were 47,235; in 1880, 59,669.

If things remain as they are, 1890 will show a further increase of this huge illiterate vote. Things will remain as they are in these matters; rather, they will grow worse, unless the South gets strong help to bear her double load of ignorance and poverty.

We are apt to put a rose color on even such figures as these. A very little ability to read and to write takes one out of the lists of the illiterate in the census tables. The inquiries are not searching; few men are willing to acknowledge that they cannot read. I make no question that many thousands counted out of the illiterate columns can neither read nor write; it is beyond all question that hundreds of thousands who can, in a mechanical way, do both are less qualified by general intelligence to vote than are many who can do neither.

Mere ability to write one's name and to read coarse print imperfectly is no good proof of fitness to vote. This sort and degree of ability may exist with absolute ignorance of the merits of the issues involved in popular elections.

Let me give a fair specimen, drawn from life. There is not a touch of fancy or burlesque in it. For nearly eight years I have had in my employment a colored man of good character and superior qualities. He is above the average of his race in intelligence; he is about my own age; he can sign his name imperfectly and he can read a little. You will miss the point in my story unless you bear it distinctly in mind that this man, Daniel Martin by name, has voted the Republican ticket every time since he was made a voter, and that he so votes to this day. Let me show how well qualified a man may be to be a voter who can just

write his name and read a store sign. The day before the Hayes and Tilden election Daniel was ploughing in a little field near my house. One of the students asked him: "How are you going to vote to-morrow, Uncle Daniel?" The southern negro never delivers a grave judgment without coming to a full pause in whatever engages him. One consequence is he comes to a great many stops. Moreover, he thinks in metaphor and speaks in parables. So Daniel came to a full stop in his ploughing, and, sticking his plough deep into the ground, delivered himself as follows:

"Now, Mr. Longstreet, you see me plowin' along dis furrow here; if I plow dis furrow all de time, I makes dis furrow too deep and I don't plow de balance of de patch." Longstreet admitted the force of the statement. The philosophic voter continued: "I think things is bin gwine on one way 'long enough; dere ought to be a change. Wharfore I'se gwine to vote for Hayes to-morrow."

The next day he and I went to our county town and voted. He voted for Hayes, that there might "be a change," I voted for Tilden that there might "be a change," and we were equal before the law.

Talk to such a man about the tariff, taxation, the currency! You had as well talk to him about horizontal parallax and spectrum analysis.

There is no question so pressing in the United States to-day as this: "What can we do with Daniel Martin in politics, the white Daniel and the black Daniel?"

Every male person twenty-one years old, not an idiot or felon, is a voter. The vote of the most ignorant weighs as much in law as the vote of the wisest. In the South ignorance is really in the majority; practically it amounts to this: Where one man in the South knows what he is doing when he votes, there is at least one man who does not know what he is doing. Sometimes there are two of them.

The votes of ignorance are not in any country—in Massachusetts or South Carolina, in New York or Georgia—determined by intelligent discrimination between men and measures. The best thing that ignorant voters can do is to vote on the judgment of the wisest men. But this is the thing they are least of all likely to do. As a rule, the illiterate voter is not under the guidance of the wisest and best citizens, but of the cunningest and most unscrupulous citizens. It is not your best man who has most power over the illiterate voter; generally it is your worst man. The least dangerous element in the votes of the illiterate is not that their ignorance disqualifies them for a rational judgment, but that it exactly qualifies them to be the tools of bad men.

It is neither exaggeration nor fancy. More than one-half the vote in the South represents just this: The wishes of wirepullers and office-seekers. What determines this huge illiterate vote? (1) In small part, the ad vice of intelligent men; (2) in great part, the management of shrewd men; (3) in large part, bribes in one form or another; (4) in

considerable part, prejudice inevitable to ignorance, whether of white people or of negroes.

What does voting like this signify to republican institutions?

There is another matter of measureless moment to be mentioned just here. Where the majority or even a great part of the voters are illiterate, cheating in elections is as easy as it is certain. The wrong done to the illiterate in such cheating is less than the injury done to those who do the cheating. In the one case, a vote cast by a man who did not know its value is not counted or is miscounted; in the other, a man who does know its value is debauched by corrupt politics.

Denouncing corruption in elections will not give us honest elections; honest elections must at least be made possible by qualifying the electors to vote rationally. There never was one man who knows why he votes, especially if he pays all the taxes, satisfied to be voted down by another man who does not know what he is doing, especially if he pays no taxes. There never were one million of men who know why they vote and who pay the taxes who would long endure to be voted down by another million who do not know what they do in voting and who pay no taxes.

It would be hard to prove that the capable ought to endure being voted down by the incapable. If they do, the ends of government are destroyed. This side the millennium capable men will not, if they can help it, endure such voting down by ignorance. After the millennium there will not be such voting. If capable men are forced to endure such voting they will come to abhor republican institutions. When this feeling is fixed in the hearts of men the foundations are destroyed.

What are we to do with the ugly facts revealed by the inexorable census table?

The treatment of these facts will depend on those to whom their attention is brought. Some men will not think of them at all; disagreeable facts they ignore, because the study of them disturbs their repose. But we do not do away with ugly facts by shutting our eyes to them. It would be as wise to reject vaccination and quarantine when small-pox is epidemic and pacify our anxieties with affidavits that there is no small-pox, or that it is not dangerous, or that it is, upon the whole, rather an advantage, as giving employment to undertakers.

Some among those who control the press of the country are content to publish these ugly and portentous facts as mere "news items." Others, seeing that here is something to arrest attention and to awaken anxieties, are content to lecture the South, telling her for the thousandth time how much behind she is. No efficient remedy this for the evils indicated by the facts. Some are in despair; they have sunk down into the abyss of political pessimism; they say there is no remedy whatever; they have despaired of the republic. With all their railings and wailings and prophesyings these men are not true lovers of their country, else they would not despair so readily.

Others are indifferent; they don't care. They are the favorites of fortune; they are having a good time, making, hoarding, or spending their money. To them the poor and ignorant are nuisances; they rather hate them than otherwise. Of the Government, of our republican institutions, they know little and care less. They have no national feeling in them; they are utterly devoid of patriotism. "They are preserving their game"—talking "imperialism" over their wine. And this class controls a great deal of money. Very careless and indifferent they are; but they have abundant reason to care. The ignorant vote, that holds the balance of power, is a constant menace to the institutions that secure them in the enjoyment of their gold, their bonds, and their palaces. This great black giant of ignorance, many-handed, grim, and desperately hungry sometimes, is digging away at the foundations. So far as money values are concerned, these careless ones have most reason to care.

Some, patriotic enough so far as mere sentiment goes, smile at the apprehensions of the thoughtful student of facts, rely complacently upon what they dream of as the glorious "destiny of the republic." They talk about Providence. There is no blinder folly than faith in Providence that refuses to use the means that Providence appoints for securing gracious results. Providence never yet saved any nation that refused to do what it could do to save itself. Such a nation is not worth saving; such a nation cannot be saved. Salvation of any sort must proceed according to law; there is no saving a man or a nation in violation of law. It would be a violation of law—fundamental and absolute—to save republican institutions by the votes of men who do not know what they are doing. No device of law, no constitutional amendments, no statutes regulating elections, no force of arms, can secure institutions that depend on elections determined by ignorance. In the very nature of things such preservation of republican institutions is impossible.

Some visionaries calm their fears by their confidence in the educating power of the ballot. The ballot has this educating power when placed in the hands of ignorance: it discovers its power to the point of making the best bargains with parties and candidates when votes are wanted.

So far, in this address, there has been no special reference to the negro vote; we have been glancing at southern illiteracy in bulk, and fearful it is; and for this good reason, a white man who knows nothing is as dangerous as any other man who knows nothing. Worse he may be; worse he is, if he has more force. If he is superior in any respect, his very superiority makes him more dangerous. When machinery is out of order, the greater the power that drives it the greater the ruin. Thoughtful men in the South are awake to the danger that lurks in the illiterate white vote of their section. When they cry for help, they want education for their white as well as for their colored fellow citizens.

But, as all informed people know, the condition of the lately emanci-

pated people of the South constitutes the stress and urgency of the appeal we make to the nation for such help to meet this great emergency as only the nation can extend.

There are now nearly seven millions of negroes in the United States, about one-eighth of the whole population. The great mass of them are crowded into eight or ten of the late slave States. They increase faster than the white population. The increase of the whole population from 1870 to 1880 was 30.06 per cent.; the increase of the white population, aided by large immigration, was 28.82 per cent.; the increase of the negro population, unaided by immigration, was 34.78 per cent. Thoughtful people will consider such facts.

Out of these facts arise questions that concern the very life of the Southern States. The whole nation should have a care for what so deeply concerns the South; for the South is a vast region of untold possibilities, indissolubly bound to the Union. The nation affirmed, through a long and bloody war, that it could not get on without the South; these States have now concluded that they cannot get on without the nation. We are one people and we expect to remain one people.

To the people of the South it is a matter of overwhelming concern that these millions of negroes, made citizens in a day and armed with the ballot, should at the earliest possible moment be qualified for citizenship. But is it a southern interest only? Is it a matter of small moment to Massachusetts, to Connecticut, to New York, to Minnesota, or to any State in the Union free from this trouble and danger of a vast illiterate negro citizenship, that Georgia, South Carolina, Alabama, Mississippi, and other Southern States are now wrestling with the hardest problem that was ever forced upon any people? Does government by illiterate votes in the South mean nothing to the States North and West? May States exposed to all the perils involved in illiterate majorities suffer the evils inevitable under such conditions without infecting with the deadly virus other States more fortunate in these respects? Carlyle tells of a poor Scotch pauper woman who could not from any get recognition of her sisterhood; she died of typhus fever. Typhus fever killed seventeen other persons in her alley; and thus she got recognition of sisterhood.

These illiterate majorities are not limited to State elections; they enter into the election of President and members of Congress. If a man in New England is interested in the election of President or of the Congress, he is interested that voters in the South should have some knowledge of what they do when they deposit their ballots.

What is to be done? These people, these ignorant people, white and black, for the most part wretchedly poor, must be educated; they must be taught to read, to write, and to keep accounts. As to the majority of the parents of the untaught children in the South, it is as much as they can do to live, to live in a very cheap and humble way. They are unable to meet the expenses of the education of their children.

Some say let the Southern States educate their own illiterates. Easy solution this, so far as words go. *But the Southern States cannot do it.* In proportion to ability the Southern States are now doing about as much as the best Northern States; more than some. The State of New York is worth in taxable property as much as all the Southern States, yet these expended on their schools in 1881 \$13,359,784; in 1880 New York expended \$9,936,652. The total valuation in New York was, in 1880, \$2,651,940,000; the total valuation of the Southern States, including Missouri, was, in 1880, \$2,903,619,070; leaving out Missouri, \$2,370,923,269. New York is richer than the whole thirteen grouped in the census tables as "Southern States."

But in such comparisons it is the poorer States that deserve most credit. It is much harder for a poor man to pay 1 per cent. on his little property than for the rich man to pay 1 per cent. upon his great property; for the rich man has more left. What is left after paying to a good cause is a better gauge of liberality and public spirit than what is given.

To illustrate the general statement that the South is not able to take care of its hordes of illiterate children, let us compare two cities. The facts now to be stated are quoted from a report by Mayor Courtenay, of the city of Charleston. Mayor Courtenay says:

The facts are these: In the first place, the assessed values in the city of Charleston were \$45,000,000 in 1860; in 1880, \$21,000,000—a reduction of more than one-half in taxable values, in the face of an obligation to educate double the number of children.

This heavy load has been assumed up to the highest pitch of taxation, however, as the facts show. The taxation in the city of Charleston, in 1880, for public schools was three and one-half mills, made up under a levy of two mills under the State law, one and one-quarter mills under the special city tax, and one-quarter mill special levy to rebuild Friend Street School—in all amounting to about \$61,000 a year on public schools. And this is exclusive of an annual appropriation to the high school of Charleston and to Charleston College.

How much above a maximum this is, and what a burden this is, is evident upon comparison. For instance, compare this taxation with the city of Boston, whose schools are models and whose people have the world-wide reputation of giving liberally for educational institutions, and we find that the city of Boston gives a total of two and a half mills in 1880 for a complete public school establishment, of seven high schools, two Latin schools, one normal school, forty-nine grammar schools, and four hundred and eight primary schools. The city of Charleston gives in proportion nearly half as much again as Boston for her primary schools alone, and gives, in addition, annual appropriations to the high school and Charleston College.

We must remember, also, that this is done under a very heavy debt of the city, the interest of which requires ten mills of annual taxation. Again, consider that, besides the State tax, the total tax of Charleston City is  $2\frac{1}{2}$  per cent., while that of Boston is only  $1\frac{1}{2}$  per cent.

Let us consider briefly whether the Southern States, with less than half the resources of 1860, are now able to educate far more (counting the increased population, three times more) than double the number of children then knocking at their doors. Brief statements will suffice for men who are informed on these subjects. Take Georgia, more prosperous than the average of Southern States. In 1860 Georgia's taxable

property was, in round numbers, \$750,000,000; in 1880, \$238,000,000. In 1860 the wealth of Georgia, exclusive of the value of slaves, was over \$500 per capita; in 1880, about \$150. In 1881 Georgia paid for her schools within less than \$1,500 of \$500,000. At the same rate on her ante bellum property her school fund would have reached \$1,500,000. The taxable property of Virginia in 1860 was \$585,099,382.77; in 1880, \$324,955,980. Yet, in 1881, Virginia expended upon her schools \$1,100,239; at the same rate upon her ante bellum property the school fund in 1881 would have yielded nearly \$2,000,000.

Dexter A. Hawkins, esq., of New York City, in an address before the Social Science Association, at the meeting held in Saratoga, September, 1877, stated the case thus:

The assessed valuation for the taxation of property, real and personal, in North Carolina, South Carolina, Florida, Georgia, Alabama, Mississippi, Louisiana, and Texas in 1860 was \$3,244,239,406; in 1870, \$1,883,863,180—a shrinkage in ten years of 43½ per cent.

In some of these States it is less in 1880 than in 1870.

When the civil war was ended these States were crushed. They were utterly disorganized in all their industries; the investments that represented the savings of their past history were swept away. They were poor beyond conception to those not having that bitter experience.

- What has been their history for nearly twenty years? A constant struggle with poverty. Embarrassed by new and strange conditions entering into, complicating, hindering all their industries, overweighted in every effort to get on their feet, loaded down with burdens and responsibilities, these States have done what they could to bear and to meet them. Hope and life would have died out of the hearts of people with less fortitude, courage, and endurance. They deserve respect, at least, that they did not utterly despair of themselves. We cannot compare the history of the past twenty years in the Southern States with any other history; that history stands alone.

What has been achieved in reorganizing society, in building up the country and its institutions, has been accomplished only by prodigious effort. These people have been lifting an increasing weight with a shortening lever; for, while there has been true progress and real growth in the industries of the South, the responsibilities of taking care of the ignorant population have grown faster than the ability of these States to meet them. If any doubt, let them compare the increase of the non-taxpaying population (over 34 per cent. in ten years was the increase of the negro population) with the meagre increase of taxable property in these States and with its actual decrease in others.

The plain truth is, the taxpaying people of the South have, as a whole, not been able to educate their own children; nevertheless, with the exception of two or three States (and these States are nearest the border), they have expended what school funds they had without distinction as to races.

As to the colleges and higher grade schools of the South, many of them, during this long period of storm and stress, have died utterly; all that survived were crippled; all are crippled now, with the exception of some of the State institutions and one or two others, helped mostly by the generosity of a few northern patriots and friends of their race. None of them have had the best facilities for doing their work. At every step in her efforts to ~~do~~ her educational work during this troubled period the South has worked at a disadvantage. The South has been under a grievous burden since the spring of 1861.

If it be demanded of me, let it be admitted that there is not so great an interest in popular education in the Southern States as in some others. But this only increases the force of the argument; for it increases the peril that is in our huge mass of illiteracy and diminishes the ability to meet it of those who are awake to the facts of the case. Beyond all question, thousands of the best people in the South are as fully awake to the truth of things and to the needs of the hour as men can be. But, for the most part, these men who do see and who do feel on this subject of education for the masses are poor—poorer than any other men of culture and character in the United States. They have done their best, lamenting their inability to do more.

Nothing is more certain than that the South cannot, unaided, meet the emergency that is now upon her.

We are told that northern charity is sending hundreds of thousands every year into the South to help do this work of education. That is true; and this patriotic and Christian benevolence is appreciated to the fullest by the best people. Heaven reward them, the Peabodys, the Slaters, Vanderbilts, Seneys, Stones, and others as generous though not so rich. They have done a good work indeed. Children's children will have them in everlasting remembrance.

But this should not be considered as entering into the question of the ability of the southern whites to do the work that is upon them, and it is the ability of the white people that is to be inquired into, since they pay the taxes. Nearly all the money sent South since 1865 for educational purposes has been devoted to the education of the negroes, especially the great sums expended by the churches and benevolent societies of the North. This is not regretted; we do not envy the negroes the help that Providence sent them. They needed it sorely, and we rejoice with them. But this method of help, good as it has been, left the white people, thousands of them as poor as the negroes, to struggle with their own burdens without the help the negroes had, and left to the white people who were a little better off the burden of their own responsibilities in the matter of education and the payment of the taxes for such public schools as they had, dividing it with the negroes who paid next to no taxes, and yet had help that they had not.

Nothing less needs proving than this: There must be more schools



and better; more teaching and better teaching. This will cost money, a great deal of money, more than these impoverished States can raise.

Where is it to come from? From individuals? But a nation cannot depend on individuals to do a work almost too great for the whole people.

From churches and other benevolent societies? They are but aggregations of individuals, and societies representing but a part of the people cannot do a work that belongs to all.

It is the duty of the whole nation to help, for a time, the States with their heavy burdens. Is it better for this nation to leave these millions of illiterate people, with ballots in their hands, untaught, than to help the States carry a load that is crushing them? Is it better for this nation to endure these evils that are now upon us and to brave the greater evils into which they are growing day by day than to spend a few millions, paid into its treasury by the people, and to do this for the benefit of the people, that is, for its own benefit?

This duty of helping the States to educate these millions of illiterate people is a national duty, for national interests are involved in it. It is a national duty, for it must be done; the States most deeply involved cannot do it and the nation can. It is a national duty for the plain, historical reason that the nation, as such, made these millions of negroes citizens and voters before they were prepared for their new duties and relations, and in the very act of doing it and by the very method of doing it largely took from those who are now called on to prepare them for their new duties and relations the ability to do it.

The men of the South who have accepted the issues of the war in good faith may well use the language of Hon. W. E. Forster, of the English Parliament, in reply to the radical wing of his party: "*You demand universal suffrage; I demand universal education to go along with it.*"

Universal suffrage we have, and in the South, as to the large majority, illiterate suffrage. There is no remedy for the evils of this state of things, whether by repression within the States where the trouble is, whether from force of any sort without these States. There is no remedy that leaves out the school-house and the schoolmaster. Ethical education is sorely needed; but ethical education will make slow progress without the education of good schools.

Sensible and just men are not now discussing slavery; that is passed out of the argument. They are not discussing the relative blameworthiness of the sections. Doctrinaires and narrow and bitter men do that. Sensible and just men say:

"See here, this multitude must be educated; it concerns us all; the nation is endangered by this ignorant ballot; these Southern States cannot carry this tremendous weight, this burden no longer theirs in any exclusive sense, but now the burden of us all. The nation can bear it and bear it easily. Let the nation forthwith get about it."

We hear somewhat about the right of Government to do this work.

(1) It is now too late to raise this question. From the time of Washington the General Government has been doing things that involved the principle and asserted the right to extend aid from the public funds for the work of education. Time and again the Congress has set aside public lands or the proceeds of the public lands for the uses of education in the different States.

(2) When a nation sets its heart on doing a great and good thing it can find a legal way to do it.

(3) As to this call for national aid, so far as the South is concerned in it, there is one fact lying right in the heart of the question that no constitutional metaphysics or legal sophistries can dispose of or make other than it is. This nation asserted and exercised the right to emancipate and to enfranchise several millions of people, to make men citizens and voters by proclamations and acts of Congress before they could read or write, before they were prepared for the duties, responsibilities, burdens, and dangers that were thrust upon them. The time has fully come when the nation should exercise the right—seeing that it has ample ability—to do what can be done, and as soon as it can be done, to prepare them to be what they are not—intelligent citizens. If the nation owes nothing to its own safety; if it owes nothing to the taxpayers of the South, charged by the nation with responsibilities they cannot meet, the nation, by every consideration of justice and humanity, owes it to the helpless negroes that it set free and gave ballots to, to now do what it can to help them get ready to be free indeed, and to vote as freemen, and not simply as “freedmen.”

Some in the South seem somewhat troubled about a sort of drift towards “centralization” that may be lurking in this proposed national aid to education. It seems reasonable that the nation should meet an emergency that its own act created. Moreover, if the nation should give this aid—coöperating, as it is most natural that it should do, with the State school authorities—there is no danger of centralization.

Some say this theory of a “paternal government”—this call upon Congress for help to educate—involves the right to call for other help, as, for instance, for “shoes for the children to wear to school.”

If it shall appear upon inquiry that wearing shoes enters into the very essence of the qualifications of a voter and voters cannot by any means procure shoes, why, in the name of common sense, let the nation buy them shoes or have done with the farce of voting. But a man may be a qualified voter without wearing shoes. One may conceive of a bare-foot philosopher voting wisely; no man can conceive of a philosopher who is also an ignoramus; no more can he conceive of a citizen qualified as an elector who does not know what he is doing.

If the nation, through its Congress, grants this petition for aid the money will be wisely and honestly used; for the best people in the South will be vitally concerned in its proper use, and the whole people—

the rich, the poor, the white and the black people—will all feel a personal interest in it. Every father will feel himself bound to watch with ceaseless vigilance that this precious money—the gift of his country for educating his children—be wisely, faithfully, economically used.

Judge WILLIAM LAWRENCE, First Comptroller of the Treasury, was then introduced, and addressed the meeting as follows:

#### CONSTITUTIONALITY OF NATIONAL AID TO EDUCATION.

LADIES AND GENTLEMEN: The remarks of the distinguished gentleman who has just taken his seat and the revelations of the census of 1880 demonstrate, among other things, *two* principal facts, which it is now proper to notice:

(1) That in all the States of our Nation illiteracy exists to an extent far greater than has been generally supposed, and that in some of them it is so overwhelming and appalling as to endanger the existence of republican government; and,

(2) That in a few of the States of the South in which illiteracy in some measure predominates the limited property resources of the people are wholly inadequate, by any system of taxation that can be devised, to supply the requisite number of teachers and other needed facilities for common schools.

We are therefore confronted with the question whether Congress can in this emergency furnish any or adequate relief. I propose to demonstrate that the Congress of the United States has ample power with the assent of any State to aid common schools therein established or authorized; and that, without such assent, Congress has power to organize and conduct schools in any State in which there is no system of schools adequately provided and supported.

In order to demonstrate these propositions it is necessary to define a republican government and to state one condition essential to its existence:

(I) A republican government is one in which the sovereign legislative power is exercised by representatives elected by qualified voters who include substantially the entire adult male population. This is the American definition. I do not now consider the question so much mooted, whether the true republic should extend suffrage regardless of sex.

However that may be, a government which excludes from the privilege of exercising suffrage any portion of the adult male citizens subject to its jurisdiction, who are not guilty of crime and who comply with the just requirements of reasonable laws, is not republican.

(II) It may be assumed, that a republican government cannot be maintained without a substantially universal secular common school education for all children of proper school age.

On this subject it cannot be necessary at this late day to quote the opinions of statesmen, or to add proof by reference to the dead and buried republics of other ages or to the utter failure of those which at this day are denominated republics, but which in fact are mere military despotisms in a chronic state of revolution.

(III) Assuming that the education to which reference has been made is essential to the existence of republican government, the real question is whether the National Government has power to preserve its own existence by providing such education.

I affirm that it has such power (1) by express provision of the Constitution, and, (2) even without this, as a necessary incident of the sovereignty with which it is invested.

The express power is found in article IV, section 4, of the Constitution, as follows:

The United States shall (1) guarantee to every State in this Union a Republican Form of Government, and (2) shall protect each of them against Invasion; and, (3) on Application of the Legislature, or of the Executive (when the Legislature cannot be convened) against domestic Violence.

So far as the exercise of legislative power is necessary to perform the duties required of the United States by this section, it of course belongs to Congress. Thus Chief Justice Taney said in *Luther v. Borden* (7 Howard, 42), that—

It rests with Congress to decide what government is the established one in a State. For, as the United States guarantee to each State a republican government, Congress must necessarily decide what government is established in the State before it can determine whether it is republican or not.

It will be noticed that Chief Justice Taney says “the United States guarantee to each State a republican government.” The words of the Constitution are “a republican *form* of government.” This manifestly was intended to secure the *substance* as well as the *form*, since the mere form without the substance would be *vox et præterea nihil*.

It is clear, then, that Congress has power by legislation to guarantee to each State a republican government.

To guarantee, says an eminent author, is “to become responsible for; to warrant; to undertake for another that, if that other does not do the thing, the party guaranteeing will himself do it.” (Paschal’s Annotated Constitution, third edition, section 233.)

If Congress shall by law decide that a State has not the means to provide adequate education or has failed to do so, and that aid to such State is essential to preserve in it a republican government and provide for such aid accordingly, this is an exercise of power which is warranted by the Constitution and cannot be questioned in any form.

The same may be said of the exercise of power by Congress to establish and control schools requisite to fulfil the duty to guarantee.

All this must be manifest from several considerations.

(1) The provision of the Constitution which gives the power to make

the guarantee is coupled with clauses giving two other powers, one to protect each State against invasion, the other to protect it against domestic violence. From this it is clear that the framers of the Constitution were dealing with the general subject of perpetuating the existence of a republican government in each geographical State. With this purpose in view, the Constitution gives power to Congress to save each State from destruction by foreign invasion or from domestic violence. One danger of domestic violence was slavery, but all forms of domestic violence are comprehended. In considering the power to guarantee a republican government, the maxim of construction is to be kept in mind, *noscitur a sociis*. The Constitution, upon this maxim, no less than by its own plain words, gives to Congress the power to save each State from destruction, from whatever source the danger may arise or be threatened.

Universal illiteracy is more dangerous than foreign invasion or domestic violence. Such illiteracy may indeed be a source or cause of domestic violence.

When invasion is threatened, Congress may act. When domestic violence may be reasonably apprehended, Congress may act.

When appalling illiteracy is not only prospective, but is already upon any State, threatening the overthrow of a republican government therein, then Congress can intervene, is bound to perform the obligation imposed on the United States to guarantee the existence of a republican government.

(2) The existence of the power of Congress, as stated, is fully proved in principle by high authority. Thus, it is said :

If there be any general principle which is inherent in the very definition of government and essential to every step of the progress to be made by that of the United States, it is, *that every power vested in a government is in its nature sovereign and includes, by force of the term, a right to employ all the means requisite and fairly applicable to the attainment of the end of such power, unless they are excepted in the Constitution, or are immoral, or are contrary to the essential objects of political society.* (Story on Constitution, 1,240.)

In other words, the Constitution, in giving to Congress the power to guarantee a republican government to each State, gives also to Congress the incidental power to employ the necessary means to do so, including the establishment of or aid to common schools. This mode of construing the Constitution is sanctioned by principles as old as the common law. Thus it is laid down among the maxims of Dwaris for the construction of statutes that—

In statutes, incidents are always supplied by intendments; in other words, whenever a power is given by a statute, everything necessary to the making of it effectual, is given by implication; for the maxim is *quando lex aliquid concedit, concedere videtur et id per quod devenitur ad illud*. (Potter's Dwaris on Statutes, 123.)

This rule is equally applicable in the construction of the Constitution. The application of it now is that the Constitution, in giving to Congress the power to guarantee to each State a republican government, gives

also the incidental power to use the means by which the guarantee can be made effectual, including the right to aid or establish common schools as a means to that end.

In those cases in which Congress is authorized to exercise powers of this character, the propriety of the means employed cannot be called in question.

Thus it has been held by the Supreme Court of the United States that—

If a certain means to carry into effect any of the powers, expressly given by the Constitution to the Government of the Union, be an appropriate measure, not prohibited by the Constitution, the degree of its necessity is a question of legislative discretion, not of judicial cognizance. (*McCulloch v. Maryland*, 4 Wheaton, 316; *United States v. Marigold*, 9 Howard, 567.)

It is thus shown that the Constitution gives to Congress express power to guarantee to each State a republican government, and that Congress may aid or establish schools as a means of securing the permanent existence of republican governments in the States.

(IV) The power of Congress to aid schools in the States exists as a necessity, as a part of the means of preserving national existence.

But it cannot be necessary to argue this branch of the subject.

(V) This power of Congress has been asserted and exercised from the foundation of our republican system of government. Immense grants of lands have been made by Congress in aid of common schools and colleges. If Congress has no power to aid schools and colleges, these grants are void. But the power to make them has been settled by long continued *usage*, which is said to be "the best interpreter of things," "*optimus interpret rerum usus*." (Broom, *Legal Maxims*, 917.)

It would be interesting to present the number and dates of the acts of Congress making these grants and to state the amount of land granted to the States respectively, but time will not now permit.

(VI) For two years past Congress has been discussing the proper mode of reducing our superabundant revenues. This is well. A reduction is demanded by the best interests of the people. While internal revenue taxes are permitted to remain on spirits and fermented liquors, I would, if I could, distribute the annual revenue derived therefrom—amounting to an average of \$65,000,000—in just proportions to the several States. This would give to each State a sum sufficient to make a large reduction in the taxes of the overburdened taxpayers. It would enable the States to pay better wages to the teachers in our common schools, who richly deserve better compensation for the highly meritorious services they are rendering all over the Republic.

By this policy the number of common schools in some of the States would be multiplied, the neglected children of the colored people who have so recently emerged from bondage be cared for and educated, and the means of ample education be secured for all the children of the land, the poor and the rich alike.

With universal education the Republic will live to bless the ages of the future.

Hon. JOS. DESHA PICKETT, State superintendent of public instruction of Kentucky, followed Judge Lawrence. The stenographer's notes of his remarks were submitted to him for revision before publication, but have not been returned. Mr. Pickett explained that he was reared in the Jeffersonian and Jacksonian school of politics and was taught to have confidence in the rights of the States; he therefore took exception to the statement that Congress has authority to establish school systems irrespective of the States. But that is not the question which is presented here. The real question is, Shall the Congress of the United States assist the States in carrying out their systems of education? The speaker referred to the grants of land made by the National Government in aid of education, and, concluding, said:

Let us then come together with a generous, fraternal spirit, and let us try to devise some ways and means whereby we may present this great question to the consideration of the Committees on Education and Labor of the Congress of the United States; and may we be blessed in this effort.

#### FOURTH SESSION—THURSDAY MORNING.

WASHINGTON, *February 22, 1883.*

Mr. CALKINS, the president, called the meeting to order, and prayer was offered by Rev. B. G. Northrop.

Mr. NORTHROP, from the committee on national aid to education, presented the following resolution:

*Resolved*, That in view of the necessity of education to the perpetuity of free institutions and of the great and disproportionate burden which adequate provision for universal education would impose on some of the Southern States, this association expresses its conviction that it is alike the duty and the interest of the National Government to extend to the several States, especially to those in which the burden and danger of illiteracy are greatest, such pecuniary aid as shall enable them to provide that all the children and youth within their borders shall receive at least an elementary education. We also express our conviction that such direct appropriations from the National Treasury should be made to the several States in proportion to illiteracy, and distributed under proper conditions and safeguards, through existing local officers. We believe that the emergency is so urgent as to demand immediate action by the present Congress, and that ten millions appropriated at once will avoid more than twenty times that amount twenty years hence; for universal education, when once fairly tried, will be continued without national aid.

On motion of Mr. NEWELL, of Maryland, the resolution was adopted.

Mr. RICKOFF, of Yonkers, N. Y., moved that the subject of Indian education be called up. Carried.

#### INDIAN EDUCATION.

The time for remarks from General Armstrong not having yet arrived, the president called upon Hon. B. G. Northrop, ex-secretary of the

State board of education of Connecticut, to speak upon this topic, with special reference to his recent visits to the Indian school at Carlisle Barracks, Pa., in charge of Capt. R. H. Pratt.

ADDRESS OF HON. B. G. NORTHP.

Mr. NORTHP said that he had not expected to open the discussion, but to follow General Armstrong and Miss Fletcher with such suggestions as his three visits to Carlisle had brought out. He then spoke as follows:

In one of these visits I spent a week in lecturing to the teachers on the improved methods of instruction, and also occupied the school hours of each day in drilling the different classes in their school rooms. Their interest, attention, and prompt response in every exercise, their eagerness to learn, and their hearty appreciation of the efforts made in their behalf, were a welcome surprise. Before describing the grand results accomplished at Carlisle, a word is needed in regard to the starting of this project.

In 1875, Captain Pratt, who had been long occupied in frontier service and had had a long and varied experience in Indian border wars, was directed to take charge of seventy-four prisoners—murderers, the worst class of criminals—to be imprisoned for three years at Fort Marion, St. Augustine, Fla. He early saw the need of occupation for these prisoners and at once started plans for educating them in trades and industries as well as in books. The sleepy old Spanish town furnished few facilities for industrial occupation. All opportunities, such as working as hostlers or in saw-mills, picking oranges, and grubbing the land, were eagerly seized, and the work was well done. It illustrates the ingenuity of Captain Pratt in devising employment for them that they were enabled to earn in a single year \$12 by polishing sea-beans. Twice they floated pine logs from a distance and built log houses within the fort, simply as a lesson in carpentry. They split the clapboards, made stick chimneys, chinking and daubing them, that they might learn to build houses on their return. They were taught many other industries, as well as the English rudiments, and such were the happy results that at the expiration of the time of their imprisonment twenty-one were inspired with the hope of a better education and declined to return to their tribes. Seventeen of these were taken to Hampton and the remainder were placed in families.

Captain Pratt early fixed his thoughts on educating the Indians in the East, where they would be removed from the debasing associations of the tribes and where they might be brought at once into a Christian atmosphere and surrounded by the conditions most favorable to their education and development in the trades.

Three years ago he succeeded in securing the consent, not only of the Interior and War Departments, but of Congress, to his use of the Carlisle Barracks for an Indian school.



In September, 1879, Captain Pratt was sent to Dakota, and then to the Indian Territory, to seek the boys and girls whose parents would commit them to his charge to be educated. So successful were these efforts that the school at Carlisle was opened on the 1st of November following with 147 students. The school is no longer an experiment. Its results have greatly exceeded the expectations of its friends. There are now 379 Indians in attendance, and a more interesting and happy company of youth I have seldom met.

There is a great and growing interest on the part of the chiefs in Indian education. This is evident from their readiness to send boys and girls so far from home for their schooling. A few years ago they would have rejected such an offer with scorn. The change in this respect is great and most hopeful, and should meet a hearty response from our Government. Captain Pratt says that such has been the result of this experiment and such is the tone of the numerous letters sent every week by these students to their parents and to the chiefs of their tribes that he would guarantee that he could start to-morrow and in four weeks, with the cordial approval of their parents, bring 1,000 Indian youth East to be educated; he would guarantee that within one year he could bring 10,000 Indians to attend kindred schools in the East, if they were open to them. This is one of many proofs of the faith and confidence which the Indians have learned to repose in this man, who is so widely and justly recognized as their benefactor and friend. The Indians are now brought East for schooling during a period of five years, instead of three as at first. One fact of great encouragement in this work is the new view of the Indian chiefs and the more educated in the tribes, that the alternative before them is education or extermination. They have come to feel—it is a lesson they have been long in learning—that they must understand the white man's ways as a matter of self defence and as the condition of their future prosperity.

The common feeling has been that the Indians are not educable; that they are a doomed race and must soon pass away, and the sooner the better, and that you might as well undertake to educate wolves or wild buffaloes. Such are the sentiments most frequently and harshly expressed on the frontier. But the Indians are here to stay. According to the Census there are nearly 300,000 Indians in the United States. We have spent over \$500,000,000 in Indian wars. We find that it costs, on an average, \$100,000 to kill an Indian; that one Indian killed has cost, by exposure as well as the incidents of war, the lives of ten white men. In reference to the practicability of educating them, Bishop Whipple says, after long association with them, that they are the noblest type of heathen on the face of the globe, and he gives strong expression to his views of the desirability and necessity of educating them. After a careful inspection of all the rooms and examination of all the classes, these youth seem to me to be remarkably keen-eyed and quick in obser-

vation, docile and tractable, though not excelling in the mastery of the English language. One hindrance to their progress in English is the very limited linguistic training they have had in their own tongues. There are at Carlisle representatives from 34 different tribes, speaking different dialects. These languages are said to be exceedingly meagre. The number of words they have used in their own vernacular is small. This difficulty will be appreciated by all who remember that language is the chief instrument of human investigation and progress, the means and measure of any one's growth and culture.

The question has been whether the Indians shall be educated near the reservations or far away. Captain Pratt's experience proves that the further they can be removed from their tribal associations and influences the better for them.

In Carlisle all the boys attend the Sunday schools connected with the different churches of that town. Great interest in their welfare is manifested by the good people of this place. Their pastors frequently address them in their school chapel, where the fine singing of these Indian youth is a surprise to every visitor. The kindness and sympathy shown them on every hand is in striking contrast with the influences which have met the Indian on the frontier, where the white man has so long been viewed with suspicion and dread.

In the "reservation schools," the savage influences of the camp or the visits of parents have often neutralized the lessons of their teachers.

In looking over the report of the Indian Commissioner, which gives the statements and experiences of the agents and teachers, I find the great embarrassment in the organization of schools has been the irregularity of attendance. That difficulty is entirely overcome by bringing them far from the tribes. Of course, the matter of attendance is easily regulated while they are at such a school as that at Hampton, or Forest Grove, or Carlisle. The last is much larger than any other supported by the Government. The matter of discipline is here very simple. I have in hand an account of the instances "reported" to the head teacher—all the teachers are ladies—for any form of misconduct during the last year; in five months there was not a single case reported.

As an illustration of their facility in learning, I may mention that I saw a class of thirty draw from memory a very excellent map of South America on the blackboard in four minutes. They drew a map of the United States in about five minutes. I have a letter written by a grandson of Red Cloud, who entered the school on the 4th of December last, a dictation exercise, but a very good specimen of writing for so brief a time of schooling. I have another from the daughter of Spotted Tail, who entered at the same time, which is a copy of a letter she wrote to her mother, and many others, which, under the circumstances, are fine specimens of handwriting and composition.

I saw the strongest indication of the pupils' desire to master the English language, and very commendable indications of their progress

in all the common English studies. They are occupied half a day in the shops, learning industrial trades, and half a day at school; and there is an evening school of an hour or an hour and a half, in which all the shop boys and girls, as well as any who have not yet found opportunities for industrial training, are occupied. They are doing admirable work in carpentry, joinery, harness making, the making of boots and shoes, blacksmithing, the manufacture of carriages, tinsmithing, and in baking. The Indian Office purchases of them a large supply of coffee-pots for the Indian service. The girls are learning the use of the sewing machine, even the more difficult work of making button holes and cutting and making dresses; and in the laundry the girls wash and iron some 2,500 pieces a week; in summer they are occupied, as much as can be arranged for, in learning domestic work in families, the boys being engaged in farm work. There is already a good sized farm belonging to the institution, and the expectation is that a much larger farm will be secured at an early day. To give the boys the desired training and experience in farming, there ought to be not less than 500 acres connected with the school. No other training would be so useful to them on their return to their old homes, where agricultural skill is little known and greatly needed. The farm work is done without machinery, that is, they do not use the mowing machine nor reaper, so that the boys may be trained in the hand work that may be of most practical benefit when they return to their tribes.

The census tells us that there are about 50,000 Indian youth of school age. There are 476 in Hampton, Forest Grove, and Carlisle, nearly 4,000 in reservation day schools, and 3,999 in boarding schools near the reservations, so that the demand, which is immediate and urgent, is only partially met.

It seems to me that Captain Pratt, from his long and varied experience, from his natural tact, quick perception and discernment of human nature, and especially of Indian character, his patience, broad Christian sympathies, his enthusiasm, and magnetic power, is marvellously adapted for his position. I think he has done more for the solution of the Indian question than any other man for the last fifty years.

The school governs itself; I mean there is a spirit of order and devotion to education developed among the boys and girls that leads them to repress any gross impropriety or disorder. In any serious case discipline is enforced by court-martial, and some of the older boys constitute the court. They are sure to make a just and fair decision, and a decision given by them is accepted as right and proper by the boys.

There are about 130 girls at Carlisle. The ages of the pupils range from nine or ten to thirty or more.

Never before in our history have the American people had such an opportunity of befriending a long injured race as now. The exigency is urgent. A liberal expenditure for Indian education will prove a wise investment. One million expended for this purpose now will be worth

more than twenty millions twenty years hence. Let the Indian be once educated, made a citizen and a landholder, and he will never again go on the war path.

ADDRESS OF GENERAL S. C. ARMSTRONG.

The work now being done at Hampton we feel to be of especial interest, including, as it does, experiments on a large scale with representatives of two races, the Negro and the Indian. These people, who are with us and with whom we share a common fate, are a thousand years behind us in moral and mental development. Substantially the two races are in the same condition, and the question as to what education is best for them, and how such education is to be put within their reach, is pressing itself closely upon all thinking men and women. Something more than ordinary school training is required for them, and it is evident to us that power lies not so much in what is taught as in the teachers and the surrounding conditions. Race education must be recognized as demanding thorough study and involving many factors. It is not tuition from books so much as a massing of all the influences of civilization. Our pupils are clay in the hands of the potter; they strive to live as they see us live; our responsibility is tremendous and our interest proportionate. Nothing short of the best teachers, with the best methods, can do justice to the work, for they must begin ab ovo and build up the individual.

In teaching language, we have one of the best graduates of Wellesley College, thoroughly trained in methods, but depending mainly upon her own inspiration. In the industrial system our pupils find a revelation. We preach a gospel of work to those whose misconception of the value of work is shown in the low standard of the southern negro laborer and the enforced and despised toil of the Indian woman. Our students work as hard during the last month of their stay in school as during the first, are paid fair wages, with which they meet their school expenses, and now earn an aggregate of about \$32,000 a year. As far as possible we avoid charity, and develop skill often to the extent of doubling or trebling a pupil's value.

On the moral side, we ask little as to the previous life, but demand a sincere intention to improve, and strike lines of development of which very few dream. Their immorality is largely the immorality of ignorance. In my fourteen years of work among the negroes the finest, most hopeful thing I have seen is the moral rally of the women.

Negro education is, on their side, only a question of opportunity, and we, who on every hand feel our limitations, are looking to Washington to increase that opportunity. Private charity and State appropriations will not take care of 25 per cent. The rest are casting ballots which they cannot read and stand as masses to be bought and sold by demagogues. Mental training helps moral development and vice versa; the identity of interest is beyond question. I know that expensive in-

dustrial schools cannot be built up everywhere, but the principle can be introduced into any school; work of some kind during part of the session can be made essential and the main idea never lost sight of.

The solution of the negro question, in at least one of its many phases, is for the present generation, by the purchase and cultivation of land, to provide a substantial basis for the healthy growth and development of the generation to come. The hope of the race lies in their getting, not knowledge alone, but with it a true appreciation of the necessity and value of labor. It is, to those who work among them, a great encouragement to find that they are remarkably able to receive and assimilate ideas.

The Indians are, of course, a widely different race, under widely different conditions, though demanding very similar training. Five years ago we, at Hampton, knew nothing about them and took up the work as an experiment. The result in the individual is a success, our Indian graduates leave us strengthened and well equipped. The problem is, what shall be done with them? They return as educated Indians to the influence of agents, who are frequently incapable men, and the chances are against them. It becomes a question of surroundings, and these are beyond our reach. We have demonstrated the possibility of producing strong and trustworthy individuals; for the conditions which alone can insure their continuous development or a field for their work, others are responsible.

ADDRESS OF MISS A. C. FLETCHER.

Two difficulties confront one who would speak of Indian education: (1) the variety of interests involved in the subject; (2) the variety of prejudices concerning the Indians. Before speaking of the first it may not be amiss to say a few words concerning the second.

The antagonism felt toward the Indian seems to result not so much from conflicts incident to our possessing the land as from his sociologic status, which differs so widely from our own. It is a comparatively recent suggestion that a social condition similar to that of the Indian preceded our present advancement, and that an intelligent study of archaic forms of society may reveal the sources of some of the laws and customs which are still potent in our midst. This suggestion, however, has not yet affected the bulk of our people, and the indiscriminate name of "savage" is still sufficient to practically cut the Indian off from human interest and sympathy. The potency of the name "savage," both in the past and the present, cannot easily be overestimated. It fixes an estimate upon the Indian; it biases observation of him; it modifies our action towards him. During the past there have been, here and there, students who have endeavored to search through the environment of the Indian for an explanation of his condition; to investigate his language, myths, and ceremonies, to find the springs of his thought and action; to study the Indian as a fellow man, and thus learn of his real

character and his every day life. The efforts of these students have not been without effect. Already the public conscience is awakening, and to-day there are many who will admit that the Government has acted wrongfully toward the Indians; but there are not so many ready to admit a personal responsibility for the prejudice and ignorance consciously or unconsciously indulged in, which have made the deplored governmental action possible. Since it is the people who mould and give force to official deeds, the public bad faith toward the Indian has been in accordance with the general indifference toward a "savage," and, while ignorance is tolerated and misstatements concerning the Indian authoritatively taught, right conduct either in private or public capacity is not likely to be the rule.

Indian society is generally supposed to be without law or order, a sort of random life, but careful investigation is showing that most, if not all, the tribes are organized into gentes, the gens being based upon relationship; these gentes combine to form fratres, the fratres join to form the tribe, and tribes unite to form confederacies; and this order of society was in force long before the advent of our race upon this continent. The gens is, so to speak, the social unit. It possesses a distinctive name, significant of its religious or social ancestry; it has a system of names which are given to its members; it has its hereditary chief, elective chiefs, and soldiers; its location in the tribal circle is fixed; and it has its functions and duties in the religious and secular tribal ceremonies. It is, therefore, a little community possessed of distinct powers, but lacking the means of perpetuation because of the law which forbids a member of a gens to marry within his gens. Thus the ties of marriage and collateral relationship bind the gentes together. Each Indian, therefore, is born into his gens, where he is thenceforth fixed, for he may not set up his tent and establish his home except with his gens, where his immediate interests and responsibilities centre. The influence of the gens holds even when the Indians have broken up the tribal circle and scattered out on individual farms, and many generations will pass before all traces of this ancient social form will cease to exist. The fratres are effective in certain ceremonies which concern the gentes and tribe. The tribe thus compacted needs little explanation at present, except, perhaps, as concerns war and the office of chieftainship.

War among the Indians is generally a private enterprise. When a man desires to avenge a wrong or wishes to wander forth in quest of booty, or if, in the recklessness of sorrow, he desires to risk his life to assuage his grief, he steps forth into the tribal circle or open space and announces his intention to go on the war path. Then, when he has fulfilled certain ceremonies, he departs, and is followed by those of his kindred or friends who care to join in the venture. Each one goes voluntarily; no one is urged or forced to be of the party. War, therefore, rarely involves any considerable part of the tribe, and there is no

record of a war ever being the unanimous wish of the tribe. Warfare partaking of this private and irresponsible character is more disastrous than when organized and national, since it renders life and possessions exposed to individual caprice. This custom, so detrimental to the advancement of a people, is in part counteracted by the authority vested in the chiefs.

It is the duty of the chief to prevent quarrels, to settle those that take place, to preserve harmony in the tribe, and to make peace with other tribes. His office is semireligious, and he cannot go on the war path or lead his people in battle unless under the stress of defensive warfare. Our failure to understand the private character of war parties and the peaceful duties of the chiefs has led to mistakes. Negotiations have been entered into between the Government and Indian soldiers, and not with the chiefs of the tribe, who were quiet at home. The tribe, not being officially represented either in the war or in the settlement, regarded the whole transaction as a private arrangement, which could not concern it as a whole. "Paper chiefs," as the Indians often call these Indian soldiers whom our army has sometimes caught and negotiated with, possess much less influence in the tribe than we are wont to fancy, and are never counted as chiefs unless they are initiated into the office by the regular tribal form.

Indian society has, therefore, its peculiar organization and is both real and effective. The same is true of the religion of the Indian. It, too, binds him fast with minute observances, intricate ceremonials, lengthy rituals, on the exact performance of which the welfare of his daily life and his future depend. The Indian's religious duties begin in his childhood and last throughout all his days. Fixity, not freedom, is the characteristic of primitive forms of society. We do not begin with freedom, but we may attain it if we are able.

Incapacity and aversion to work are supposed to be characteristic of the Indian, and are spoken of in connection with his being a hunter, and, in the popular notion, to be a hunter is to live for sport and the pleasures of the chase. When food is dependent upon the precariousness of game, the occupation of the hunter becomes one of grave responsibility and labor. Among many of the tribes hunting was conducted under the control of leaders, who were appointed to the office with certain religious ceremonies, and any person undertaking private hunting ventures without the knowledge and sanction of these officials would incur serious punishment. These rules were rigidly observed in the buffalo country. The life of an Indian man after reaching maturity was filled with activities and dangers, and it was impossible to avoid such a life in a land devoid of animals capable of being domesticated. The restless anxiety, bred of the fluctuating supply of food, was a heavy load of hindrance and retarded the advance of the people. Sex determined the occupation of the individual. The men composed the combatant force, they were the protectors and hunters; the women

formed the non-combatant part of the community, and were the agricultural and industrial portion of the people. Many of the peculiarities of the Indian race and customs are traceable to the absence of domestic animals. Our more fortunate race, being bred on a continent where lived the sheep and the ox, laid upon these animals the burden of food supply, and the mind, thus freed from its most pressing need, asserted its creative power and devised better modes of living, and gradually society developed into coördinated forms and industries. It is a suggestive speculation to consider what would have been our present condition had our immediate ancestors been forced to accept the poverty of this country in respect to animals, cereals, and fruits. When we look at the Indian mode of life, it is important to remember his environment on this continent and its potent limitations.

The Indian has always been a kind of artisan, and his hand is skilled by long heredity to steady lines and strokes, more fine than heavy. The trend of his past turns him toward the shop, where the work of the eye and hand are coördinated. To prove the truth of this statement it is only needful to call to mind the silver work of northern and southern Indians, the bows and arrows and other weapons, the wrought bone implements, the pipes, both historic and prehistoric; nor should woman's handicraft be forgotten, her weaving, quill embroidery, the articles made of skin, bark, and wood, her pottery making and free hand ornamentations. Our museums bear ample testimony to the industrial ability of our native races. The Indian, therefore, is not lazy, but he does not labor as we labor; he has not learned the value of persistent work, which begets provision and care for the future; and his environment in the past has been of such a character as to furnish no suggestion as to the need of such caretaking, but rather the contrary.

It is worth noticing that the Indians have not invented a lock and key, as it opens a singular vista concerning their estimate of possessions. When about to leave their villages they cached their goods to prevent loss from their enemies. Thieving among them is rare. The chiefs enforce the return of articles stolen. It would almost drop the race from the list of mankind to assert that Indians never steal, but it may truly be stated that stealing is not a characteristic trait. The contrary prejudice on our part is queerly indicated in the following quotation from an official communication: "They [the Indians spoken of] are honest, or, at least, as honest as it is usual for Indians to be. I have never known them to steal and their word can usually be relied on."

Treachery toward a friend is almost unknown among Indians. Toward an enemy it is as it is with us: "All is fair in war." To the outside observer vengeance often seems indiscriminately practised by the Indians, but, according to their laws of the responsibility of kinship, the acts find explanation. Among the Indians kindred rise and fall together; any or all can be held responsible for the act of any one of kin, whether all are cognizant of the act or not. According to our law innocent and



ignorant persons may thus be made to suffer, but, according to Indian law, kinship must bear the burden. It is not many centuries since a similar code held us in its clutch.

When fairly dealt with the Indians are, as a rule, friendly, honest, and true. Truthfulness is an Indian trait. The ideal man is "straight." "I have talked to you without branches," said a venerable chief. The Indian idea of truth is simple, literal, hugging close to the fact, and this idea is consonant with his elaborate social and religious ceremonies. "It is" or "It is not" covers all the ground to the Indian, and he finds it difficult to comprehend the contingencies which hedge about our life and thought.

A careful study of the Indian reveals him to be a man bearing the marks of a common human nature. His peculiar environment has developed him in lines that do not coincide with our lines of development. If his ancient environment were to continue unaltered there would be little hope of any speedy or great modification of his ancient social and religious forms. But his environment has already changed, and he is to-day stranded upon unknown and untried circumstances. For this change we are directly responsible, as well as for the difficulties involved and their solution. We have corralled the Indian and tried by various expedients to postpone facing the problem of his future, until at last further delay is impossible. His future is indissolubly linked to our own, and the welfare of both races demands careful consideration of the question before us and the difficulties involved in it.

According to the last report of the Indian Commissioner there are in the territory of the United States, exclusive of Alaska, 262,366 Indians. Of this number 64,393 belong to the five civilized tribes in the Indian Territory and the Six Nations of New York State, leaving 197,973 Indians whose treaties and relations place them in direct line with our responsibility. The amount of land held in reservations is 224,259 square miles, covering an area of 143,525,760 acres. Deducting the amount belonging to the civilized tribes before mentioned, which is 19,672,147 acres, of which only 9,500,352 are classified as tillable, there remain 123,853,613 acres, contained in about 124 reservations, not including the Pueblo villages. These reservations are under the management of 59 agencies and are scattered over 11 States and 9 Territories.

*Distribution of uncivilized Indians in the United States.*

States and Territories.	Reservations.	Agencies.	Indian population.
California .....	5	4	11,013
Colorado .....	1	1	925
Iow .....	1	1	350
Kansas .....	5	1	633
Michigan .....	3	1	9,795
Minnesota .....	9	1	4,382
Nebraska .....	6	2	4,014
Nevada .....	4	2	7,831
Oregon .....	6	5	4,520
Wisconsin .....	7	2	7,756
Texas (military control) .....			108
Arizona Territory .....	6	4	14,241
Dakota Territory .....	13	9	30,117
Idaho Territory .....	4	3	3,652
Montana Territory .....	3	5	18,705
New Mexico Territory .....	3	3	28,527
Utah Territory .....	2	2	2,371
Washington Territory .....	16	4	13,286
Wyoming Territory .....	1	1	1,782
Indian Territory, exclusive of civilized tribes .....	19	6	18,531

There are, besides, 15,434 Indians living at large without Government supervision or special land provision, and this does not include the remnants of tribes living in the Eastern States. The wide extent of country over which these tracts are spread, the variety of products, and the character of the soil should prevent too sweeping generalizations when considering how these Indians are to become self supporting on these lands.

Heretofore the question of Indian land tenure has overshadowed all other considerations pertaining to his welfare. Important as is this question, the statistics contained in the Commissioner's report show it to be less simple than has been supposed. Of the 123,853,813 acres contained in the 124 reservations and set apart for the support of the 197,973 Indians, only 8,096,463 acres are reported as tillable, which would give not quite 5 acres to each Indian. This calculation, however, is based upon an even distribution of the tillable land according to the location of the population, but the report shows that the tillable land is very unevenly distributed.

In California the number of Indians upon reservations is 4,874 and

the tillable land is put down at 5,500 acres, giving to each Indian  $1\frac{1}{2}$  acres for his support, and that, too, in a region where irrigation is necessary to raise an adequate crop, and when we add the 6,579 Indians in the State who are not under any care the pro rata amount of land would be still less. In Michigan the 65,000 tillable acres give to each of the 9,795 Indians a little over  $6\frac{1}{2}$  acres. In Wisconsin  $2\frac{1}{2}$  acres of tillable land would be the portion of each one of the 7,756. In Nebraska nearly 30 acres could be allotted to each Indian. In the Indian Territory about 40 acres would be the share. In New Mexico barely 5 acres would go to each one of the 28,527 Indians.

In view of these and similar figures which could be presented, the question of the Indian becoming self supporting is something more than giving the Indians titles and telling them "to go to work on their lands," even if every Indian were adapted to farming. Agriculture, when the land is suitable, will undoubtedly be the employment of a large number of Indians, but it is clearly impossible for all, since there does not remain enough tillable land to yield support from the soil alone. The inexperienced labor of the Indian adds to the difficulty, and this arises from his isolation and consequent lack of training by means of observation and contact with farmers. It may not be inopportune to allude here to the fact that, heretofore, tilling the land has been considered by the Indians as woman's work, and the Indian man possesses the aversion, common in our own race, of one sex entering upon the conventional occupation of the opposite sex.

A considerable portion of the land classed as tillable requires irrigation, and to make such land profitable capital is needed and intelligent labor to construct ditches, canals, flumes, &c., and to keep them in repair. To force a people to accept the responsibility of gaining self support under such circumstances involves the obligation on our part of providing an education adapted to the environment.

A considerable portion of the land reserved is suitable for herding and there are many persons in our midst who advocate this occupation for the Indians as especially suitable and quote the advance of our race in the remote past through herding. The environment of our race was very different from the conditions of this continent, where the absence of animals capable of domestication has left the Indian without a heredity which would tend to make him successful in the care of animals. Herding is to-day not a pastoral occupation, but a business requiring capital, executive ability, and a knowledge of the market. None of these requirements are at present possible to the Indian, particularly with his barrier of language and ignorance of commercial methods. Herding for the Indian is for him to become practically a "cow boy," and the value of this schooling for civilization is at least questionable.

Looking at the Indian tribes from a close personal knowledge and study of their life and customs, it seems plainly indicated that variety of occupation and modes of winning self support is to be the rule with

them as it is with us. Nor can one expect every Indian to become an industrious, enterprising landholder. There will be such among the tribe, but there will also be the shiftless, indolent class that exists in every community. Heretofore this class among the Indians has been mainly regarded by us, and we have been inclined to gauge all Indians by the non-progressive ones. Our method of treating the race has been to level down and to attempt to make the community alike. The results have been unfortunate. It is the salvation of a community to permit those who can to advance and distance the less vigorous. It rouses latent forces and brings about thrift and social improvement. A moment's reflection will suffice to convince one of the disasters sure to follow an opposite course, and yet it is just this opposite course which has been enforced without exception upon the Indians until very lately.

The industrial schools at Carlisle, Pa., Hampton, Va., and Forest Grove, Oreg., are movements toward recognizing the value of the individual Indian. At these schools he is taught trades, the value of labor, personal responsibility, and is thus prepared to cope with the world and earn his own living. If, after five years spent at either of these schools, he chooses to become a farmer, stock raiser, or mechanic, he enters the field with a wider knowledge, a shiftiness of mind, that he could never have gained without this industrial training received at these schools and direct and friendly contact with our own race. Such training is the key which unlocks the prison door and sets the Indian free from the trammels of his own past and the white man's prejudice. Work makes the world akin, and the Indian can and he is willing to work, and eager to learn, as eager at least as it is possible for him to be, since he does not fully understand the benefits of knowledge. As has been remarked, the heredity of the Indian man inclines him to the trades, and he has shown considerable adaptiveness where opportunity for such work has been given him. In any vocation, however, which the present generation may undertake, allowance should always be made for the Indian's previous lack of training in persistent labor; this lack is perhaps the greatest drawback from which the Indian suffers.

The one thing imperatively needed for the Indian is industrial education. Educate him thus and he becomes a friendly neighbor and co-worker. Keep him in ignorance and isolation and he becomes dangerous to his own future and to those about him.

The Commissioner's report states that the number of Indian children who are of school age, exclusive of the five civilized tribes, is 34,662, and this is an underestimate, as several tribes are not reported. The number of reservation schools is given as 73 boarding, 105 day, and 2 night schools. These schools are maintained at a cost to the Government of \$278,733, exclusive of rations and part of the clothing. Various religious societies contribute \$58,725, and the State of New York \$17,644. The industrial schools at Carlisle, Pa., Forest Grove, Oreg., and the Indian department at Hampton, Va., receive from the Govern-

ment \$91,394, and religious societies donate to these institutions \$49,882. It is not improper to state that but for the generous outside support the effectiveness of these schools would be seriously curtailed.

The schools at present in operation can accommodate only 10,202 children, leaving a school population of 24,460 without any possible means of education or instruction in the ways of civilized life.

Where is the block in the way of educating these children? It is in Congress, which should appropriate the money. It is but just to say that there are men in Congress who appreciate the need of education for the Indian, who desire to have the money appropriated; but they are surrounded by such a dead weight of indifference and ignorance that they can make little headway. This year the appropriations are inadequate, considering the needs and just demands. Treaty obligations, the appeal of the Indians through their agents, the urgent request of the Commissioner of Indian Affairs, and the plain setting forth of the Secretary of the Interior failed to move the congressmen from their short-sighted policy and false notions of economy.

It is cause for congratulation that the present Secretary of the Interior is seriously and practically in earnest to secure education for the Indian. He says in his report:

At least one-half of all the Indian children of school age should be put in manual labor schools. \* \* \* A large number can be provided for in the several manual schools of the different States. The capacity of the labor schools already established can be increased so as to accommodate a large number. A number of United States military posts, no longer needed for military purposes, can be used for the purpose of Indian schools, the Government thereby saving the cost of erection of buildings, &c. With liberal appropriations it is quite possible to provide for the education of 10,000 Indian youths in manual schools during the fiscal year 1884, and at least twice that number during the fiscal year 1885. \* \* \*

10,000 children in the fiscal year 1884, at \$250 each .....	\$2, 500, 000
20,000 children in the fiscal year 1885, at \$200 each .....	4, 000, 000
25,000 children in the fiscal year 1886, at \$200 each .....	5, 000, 000
30,000 children in the fiscal year 1887, at \$200 each .....	6, 000, 000
25,000 children in the fiscal year 1888, at \$200 each .....	5, 000, 000

\* \* \* At the end of the fiscal year 1888 there will have been discharged 20,000 children who will be able to care for and support themselves, and the total expense of the education of this number with those remaining in school will not exceed \$22,500,000, or about two-thirds the amount of money expended for the suppression of Indian hostilities during the years 1864 and 1865. Since 1872, a period of only ten years, the cost of Indian hostilities and military protection against the Indian is estimated by the military authorities at \$223,891,264.50, or an annual expense of \$22,389,126.45. To this must be added the yearly appropriation for subsistence, which averages about \$5,000,000 a year. \* \* \* It is useless to attempt the civilization of the Indian through the agency of schools, unless a large number of children, certainly not less than one-half the total number, can have the benefit of such schools, and even then it is not wise to depend wholly on that agency. \* \* \* It is believed that with an annual expenditure of between \$5,000,000 and \$6,000,000 during the next fifteen years for educational purposes of the character herein indicated, the danger of Indian outbreaks may be avoided and the great mass of Indian youths at least made self supporting.

Such prudent advice falls short of practice for the lack of money, and the money is withheld because the people who elect the congressmen are indifferent and ignorant concerning the Indian and his needs. It is most fitting that at last this national interest and question has found its way before the educators of our country, for they have the power to spread knowledge and hasten the day of right doing toward the Indian race.

#### SCHOOL SUPERVISION.

Mr. SMART moved that there be a recess of five minutes; which was then taken.

After this recess the president called for speakers on the subject of supervision in accordance with the following published programme :

#### SCHOOL SUPERVISION: SPECIFIC AIMS; METHODS EMPLOYED.

It is desired that each superintendent shall present a definite, brief statement as to what is made the leading aim in his supervision, with a very concise description of the most successful methods employed, the kind of supervision to be designated as State or general, city or graded schools, country or ungraded schools.

In order that there may be such unity in points considered as will allow an arrangement of the statements into topics, it is suggested that attention be given to the following:

(a) Mode of licensing teachers; (b) plan for determining the character of teachers' work; (c) number of departments in the schools; (d) how and by whom the fitness of pupils for promotion is determined; (e) frequency of promotions from grade to grade or school to school; (f) the chief means used for securing school attendance; (g) the practical results of compulsory education; (h) chief obstacles to successful results in the schools.

Mr. C. G. EDWARDS, of Baltimore, spoke as follows in reference to the question

#### HOW AND BY WHOM THE FITNESS OF PUPILS FOR PROMOTION IS DETERMINED.

Mr. PRESIDENT: The subject of promotions, although apparently simple, is in practice one of the most perplexing with which teachers and superintendents have to deal. There are various interests at stake, all of which must be taken into account. The welfare of the pupil is of course the paramount interest; but the teacher of the lower grade must be considered, and the teacher of the higher grade also, as well as the general good of the school regarded as an organic whole. The parent, too, will sometimes step in to complicate a question already complicated enough.

It would seem at first sight that the teacher who knows most about the pupil is the best qualified to determine his fitness for promotion, and this is the teacher of the lower grade. He (or shall I say *she*?) knows: the other can only *guess*. But in practice this opinion would undergo some modification. It would be found that teachers generally are apt to overestimate the attainments of their pupils. With the greatest honesty of purpose, they are apt to make mistakes, and the mistakes

are almost always in the same direction. And sometimes even honesty of purpose is wanting. A pupil is promoted, not because he is competent, but because he is troublesome. It is the easiest way of getting rid of him. And he may be promoted because he has been a long time in the grade and the teacher is ashamed to retain him longer. Promotions determined by the teacher of the lower grade are apt to be too numerous or too frequent; and injudicious promotions are injurious to the pupil and may be ruinous.

On the other hand, if the promotions are determined by the teacher of the higher grade on questions prepared by this teacher, the chances are that some well prepared pupils will fail. It is a curious fact, which I am unable to account for, though it is within the experience of almost every principal teacher, that in such an examination one or two of the best pupils will fail and one or two of the worst will pass. This, however, is only a minor evil. The great objection, I might say the *fatal* objection, is that it leads to, produces, encourages, and almost necessitates cramming. The teacher below finds out or shrewdly guesses the line of examination and adheres closely to that line in teaching. You will say the teacher is not *obliged* to do so. But consider the circumstances. A teacher's ability and success are gauged by the number of pupils that he can "pass" to the grade above. This may not be fair; it is in many cases very unfair; but it is the fact; and as the teacher who studies the coming examination most closely, guesses it most accurately, and sticks to it most closely is sure to "pass" the greatest number of pupils, the temptation to "cram" is almost irresistible; and the more there is of cram the less there is of useful learning.

It thus appears that neither the teacher of the lower grade nor the teacher of the higher can be safely intrusted with the exclusive prerogative of determining what pupils shall be promoted. The objection against the teacher of the higher grade applies with equal or even greater force against the superintendent. But it seems to me to be possible to combine all three in such a way as to yield better results than can be had from any one separately.

The best proof of a pupil's having mastered one step in a series is his ability to take the next step. Indeed this is often the only genuine test. It is quite possible to teach one part of a subject in such a way as to unfit the pupil from pursuing it further. It is also possible to teach it in such a way as to yield no visible results on examination and yet to leave the pupil's mind in the best possible condition for continuing the study and prosecuting it successfully. It is this obligation, real or supposed, on the part of the lower teachers to produce some visible result, capable of being expressed in figures, that generates and perpetuates cram and is rapidly driving teaching from the field.

I would suggest, then, for the best interests of the pupil, and for the advancement of education and the destruction of cram and the encouragement of sound teaching, that promotions should be determined by

the teacher of the lower grade. I am aware that this privilege may be abused, and therefore some check must be provided. If the pupil promoted is unable to prosecute the studies of the new grade and if this inability is due to deficient preparation in the grade below, he must be remanded to that grade. But as such a course is surrounded with difficulties, it should not be taken except after mature deliberation. The two teachers should consult together on the matter, and if they cannot agree the advice of the principal or superintendent should be asked. In this way we obtain the advantage of the collective wisdom of the three persons best qualified to make a decision.

The great advantage of such a scheme as this is that it is a direct and powerful stimulus to the teacher, urging him to the best that is in him. For he will speedily discover that pupils who have learned the right use of their faculties can sustain themselves in the new grade, while those who have been only crammed are likely to fail. Self interest then works on the side of good teaching, and not, as at present, on the side of cramming. Some persons are afraid that, when the spur of examinations for promotion is removed, teachers may become careless. But the fear of having a pupil sent back is the strongest kind of stimulus, and it stimulates to *good* work and not to mere show. It is not necessary and would not be proper to give up the examinations. They would still be useful; but they would be shorn of their power to harass both teachers and pupils.

I can think, Mr. President, of no simpler or surer method of relieving teachers and pupils from the ill effects of our high pressure system than the plan I have suggested of giving to the teachers of the lower grade the power of making promotions at discretion, with the proviso that pupils may be returned if, after due trial, they are found unfit for the studies of the new grade.

Mr. SANFORD criticised the marking system, and believed that children should be examined from text books which they had not studied. Examinations are held periodically in Middletown, and the records are examined by the superintendent before promotion. It is not best to consign the matter of promotion to the teacher of the lower grade; this should be in the hands of the superintendent or competent principals.

General EATON said that the method of the examination has much to do with the place of the examination. The English have by their use of examinations made them an instrumentality of cramming; so much so that the very distinguished German school officer, Dr. Wiese, was startled to find the extent to which they had been pushed, and the result. The Germans employ examinations, but in such a way as to promote healthy growth. Great care must be used in conducting these tests. Teachers are too apt to mark pupils zero if a slight mistake is made.

Mr. SMART said that for six or seven years he had been a member of a board that has examined 120,000 teachers, 40,000 being rejected.



The same paper had been sent as a test to the ninety-two examiners composing the board in Indiana, and the valuation of the answers given had varied greatly. With a large number of examiners changing office frequently, it is impossible to secure uniformity. This subject needs careful study.

Mr. TAPPAN stated that the method he had adopted in examining teachers, and that was found to work well, was to mark those reaching a certain percentage as passing and those below a certain other percentage as failing, while all between were to be reëxamined.

Dr. PATTON said that he found that many persons have a standard for colored students and colored teachers entirely different from the standard for white students and white teachers. Teachers sometimes mark colored pupils too high. This gives the pupils false ideas of their own attainments and of perfect recitations. There are several southern institutions whose college course is parallel with a normal course, save in a single year. These facts should be brought before the public, and especially the educational public, in such a manner as to secure a popular sentiment that would rectify these great evils.

#### COMPULSORY EDUCATION.

The president called upon Hon. Joseph White, ex-secretary of the State board of education of Massachusetts, to speak upon the practical results of compulsory education.

Mr. WHITE stated that practically he was pretty familiar with the question; that he had long ago reached the conclusion that a good deal of money was lost to the State and much trouble caused by reason of the irregular attendance and the non-attendance of large numbers of pupils. No school system can be successful which does not secure the regular attendance of a preponderating majority of the children.

A law was passed in Massachusetts requiring the attendance of all children of school age for at least twelve weeks in the year. Afterwards a law was passed compelling guardians to send their children to school for twenty weeks in the year, each ten weeks to be continuous. Most of the schools are taught forty weeks in the year. In the country the aim has been to secure schools of thirty-six weeks in the year, divided into three terms; that is as good an arrangement as can be made in the rural towns. The chief difficulty in the way of regular attendance occurs with reference to manufacturing establishments. In one town an arrangement was made with the manufacturing agents by which they took a number of pupils at one time and then took another class, and this plan worked very well. Mr. Marble is here, who devised one of the best systems for his own city, Worcester, and he can speak with accuracy on these points.

The result of this compulsory law is that the attention of the people of the Commonwealth is turned to the business of educating their chil-

dren, and they are made to feel the responsibility of it. This law applies to children between eight and fifteen, and is substantially carried out throughout the State.

Mr. MARBLE said that when the law was changed copies were printed and sent to the various manufacturing establishments. The requirement is that all children between the ages of eight and fourteen shall attend school twenty weeks, and that the employers of children shall never engage a child under ten years of age; also, that an employer shall have in his possession a certificate for every child employed stating the amount of school attendance the preceding year, if the child is under fourteen, or that the child is fourteen or more years of age. In the larger cities truant officers are employed; they look up children who are absent from school, and also examine the various manufactories periodically to see if children are employed contrary to law. The bare fact of the employment of children under 16 years of age without a certificate of the school committee is *prima facie* evidence, and the employer can be fined \$20 to \$50 and costs for each case. A fine of \$50 may also be imposed on the parent.

Mr. SANFORD asked what was done with the street hoodlums.

Mr. MARBLE replied that children who are found wandering about the streets and public places and growing up in ignorance are regarded as vagrants; they are found by the truant officers and taken to school. If the scholar should not attend school regularly, after two or three days he is admonished in a solemn and impressive tone of voice; sometimes this has to be repeated. At length, after a period which is to be determined by the school authorities, the boy is arrested for truancy and is sent to the truant school for a term of six months to two years. This truant school is a wing of the almshouse. In the city of Worcester, with a population of 67,000, there are 8 boys at present in the truant school. Very few of those inclined to truancy need to be sentenced to the truant school.

Mr. HARRINGTON inquired whether the boys in this school come in contact with the people in the almshouse.

Mr. MARBLE replied, "Not at all."

Mr. NEWELL asked how much truth there is in Governor Butler's statement of the illiteracy in Massachusetts.

Mr. WHITE replied that it is not becoming to criticise the "supreme executive" of the Commonwealth. The amount of illiteracy had been found years ago to be .057, and according to some recent statement it is less than .060 now, just about enough to cover those who are utterly incapable of learning—idiots, &c.

Mr. SMART said that, of course, a large proportion of the illiterates are foreigners who came to this country too late in life to derive benefit from the schools.

General EATON expressed a desire to hear from Mr. Marble in refer-

ence to Canadian immigration to Worcester and its effect on the schools.

Mr. MARBLE replied that there are 4,000 French Canadian residents in Worcester, a certain proportion of whom are permanent residents and good citizens, and certain others who come to the city for the summer and work in brickyards and similar places and as soon as they earn a few hundred dollars return to Canada. The French Catholic priest has done a great deal towards nationalizing these people. He has invited the superintendent of schools to visit the schools conducted for them, at any hour of the day. In all the parochial schools of the city there are 1,500 pupils, and these pupils receive certificates from the school committee on the same plan as the pupils of the public schools.

#### CHIEF OBSTACLES TO SUCCESSFUL RESULTS IN THE SCHOOLS.

In reference to this subject, Mr. NEWELL said :

In speaking of successful results from our public school system, there are really two questions involved : we may consider results in quantity or results in quality. We may inquire, in the first place, what are the obstacles which have prevented the universal spread of education throughout the country by means of public schools ? Why is the number of children who are not in our public schools so large ? In the next place, we may inquire as to results in quality. Are the pupils of the public schools as well educated as they ought to be ? If not, what are the obstacles that prevent the schools from doing better work ? Among the obstacles which impede the more general diffusion of education by means of our public schools, I mention, in the first place, the indifference of parents. The remedy in this case would seem to be what is termed "compulsory education," and it is the remedy which many educational doctors would prescribe; but for my part I am not able to see this matter exactly in the same light as the "doctors." I have no confidence in law unsupported by public opinion. I have great doubts of the efficacy of law to make people religious, or temperate, or learned. There are cases where the state must intervene for the protection of children against their parents; but these are exceptions. As a rule, we must assume that parents do not wish to injure their children. I would employ the missionary before calling in the constable to school.

Another obstacle to the universal spread of public schools is the disaffection of a considerable minority of our population to the whole scheme of secular education. These persons think that a school system which is exclusively secular is dangerous, and that there must be a certain admixture of religious instruction in order to make reading and writing safe acquisitions for the masses of the people. It is hardly worth while to dwell on this point. If the church will educate the children, let the church educate them. The catechism will certainly do no harm. If, however, the church does not educate the children, then it is the business of the state to step in and do the work.

It is said that nothing succeeds like success; but the greatest obstacle, in my opinion, in the way of the universal spread of elementary education is the amount of success which the public schools have already had. The apparent paradox can be easily explained. That which is common is apt to be neglected. Fifty years ago, to be able to read and write well was a distinction to mark a man in his community; he was so much more able as a workman and so much better as a citizen that all men took knowledge of him that he had been to school. But education is a great leveller; and it has levelled not only by filling up the valleys but by cutting down the hill-tops. We have more readers than any other country in the world and fewer thinkers in proportion to the number of readers. As long as it was evident that it was a great advantage to be something of a scholar, parents were anxious to send their children to school and to college, but education has now ceased to be a distinction and many wealthy parents are unwilling to send their sons to college, as many poor parents are indifferent about sending their children to the common school.

In the next place I will say that our public school system has not that elasticity and that adaptability, that power to meet emergencies, which will produce rapid and permanent results. Go back for half a century and you will find that our schools were organized for the purpose of supplementing existing deficiencies. A large number of people who were living in comfortable circumstances sent their children to private schools, but there was a great mass who got no schooling at all. The new public schools took in these neglected masses and gave them an elementary education. At first the course of instruction was very elementary indeed, but by degrees the standard was raised; the public school tried to be as good as the private school; it succeeded; then it tried to be better than the private schools; it succeeded; but the very success tended to remove it further from the very class of children for whose benefit it was originally established. Theoretically, the public school is for all; practically, it is conducted with less regard to the very lowest stratum of society than is desirable.

Our public schools are now the best schools to be found, but they are surrounded by a set of rigid rules, customs, and traditions which have a tendency to keep out the very children that these schools were established to educate. Take one of our ordinary rules, that the child who has been absent from school two days in any week or four days in any month shall be suspended—that is to say, be driven out of school. Because for some reason or other he has not been able to take the *full* advantage of the school, our rule says he is to have no advantage at all. Surely the proper function of the school is to gather the children in rather than to drive them out. I say, then, in a general way, that our school systems need to have a little more adaptability to the conditions in which we are now placed. Much injury results from the dissociation of education and labor under our present system, two things which

God has joined together and which man ought not to put asunder. I believe that a child needs to learn to drive a nail just as much as he needs to learn to read a newspaper. In some way this deficiency must be remedied, if elementary education is to be made universal.

In the second place, looking to the quality of the education given in our public schools, the great obstacle to perfect success is the lack of trained teachers. Not one in ten of the teachers of the United States has received any special education or training to fit him for his business. Those who are long enough at work learn something; some of them learn very little.

And then there is another lack, the want of skilled supervisors who might, to a certain extent, make up for the lack of trained teachers. Here and there we have a competent and well trained superintendent, but often that trained and competent superintendent is neutralized by his committee, and, instead of being able to do what he knows is right and good and useful, he has to spend his days and nights in trying to do just as little harm as possible. The very selection of our school books is often left to men barely capable of reading one of them from beginning to end. If any good results in the near future are to be achieved in connection with our public school work, it must be by leaving the practical management of our schools to men who are experts in their profession. It is as ticklish work as ballooning, and requires just as much nerve as to attack a battery.

I will mention only another obstacle; it is, perhaps, not so much of an impediment after all, for it sometimes does as much good as harm. I refer to what I may call the destructive criticism that meets us in our newspapers and in some of our periodicals and other publications. No school man objects to criticism; he welcomes it. No school man objects very strongly even to unfair criticism; provided that the facts are accurately stated, we can make allowance for the wrong deductions. I refer to the kind of criticism which says "this is all wrong" and never gives you a hint as to how to make it right—the criticism of Gail Hamilton, for example, the criticism of Richard Grant White, and of General Butler. Your high schools, they tell you, are all wrong; but nobody has ever proposed to do away with the high school. You are cramming the children with useless technical knowledge, they say; but they do not tell you how to avoid the cramming. This is the work which is good for pulling down and not for building up. I can say as hard things about our public school system as, I think, any man here, but then I hope I have something to suggest in place of what I have criticised.

Having dwelt so largely on the obstacles which our public school system has to contend against, I may say, in conclusion, that I do not consider them, on the whole, to be very formidable. They will not stop the car of progress, and they can hardly retard it very much. Notwithstanding the indifference of parents, the opposition of the church, the rigidity and inelasticity of our system, notwithstanding our lack of

trained teachers and competent supervisors, the public schools are making progress and will continue to make progress. I have an abiding faith in their ultimate and permanent success.

Mr. PICKETT enforced the necessity of the proper inspection of schools, and Mr. WHITE spoke of the excellent results accomplished by women as members of school committees in Massachusetts.

#### CONCLUSION.

Mr. JONES introduced the following, which was unanimously passed:

*Resolved*, That the press of Washington be tendered the thanks of the department for the full reports given to the public.

General EATON called attention to the Holland Exhibition, and expressed a hope that American education would be well represented.

On the motion of Mr. MARBLE, the department then adjourned to meet with the National Educational Association at Saratoga on the 9th of July.

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